

University of Vermont
ScholarWorks @ UVM

Graduate College Dissertations and Theses

Dissertations and Theses

10-2-2009

A Case Study: Assessing the Validity and Reliability of the Multidimensional Sportspersonship Orientation Scale Among College Athletes

Geraldine Knortz
University of Vermont

Follow this and additional works at: <http://scholarworks.uvm.edu/graddis>

Recommended Citation

Knortz, Geraldine, "A Case Study: Assessing the Validity and Reliability of the Multidimensional Sportspersonship Orientation Scale Among College Athletes" (2009). *Graduate College Dissertations and Theses*. Paper 125.

This Dissertation is brought to you for free and open access by the Dissertations and Theses at ScholarWorks @ UVM. It has been accepted for inclusion in Graduate College Dissertations and Theses by an authorized administrator of ScholarWorks @ UVM. For more information, please contact donna.omalley@uvm.edu.

A CASE STUDY: ASSESSING THE VALIDITY AND
RELIABILITY OF THE MULTIDIMENSIONAL
SPORTSPERSONSHIP ORIENTATION SCALE AMONG
COLLEGE ATHLETES

A Dissertation Presented

by

Geraldine S. Knortz

to

The Faculty of the Graduate College

of

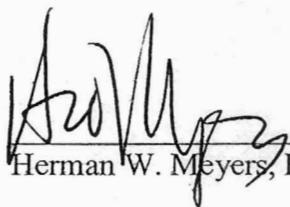
The University of Vermont

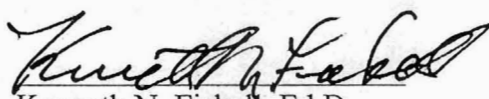
In Partial Fulfillment of the Requirements
for the Degree of Doctor of Education
Specializing in Educational Leadership and Policy Studies

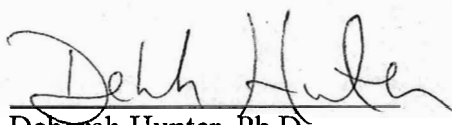
May 2009

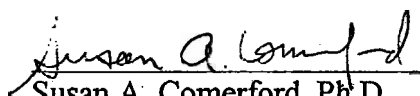
Accepted by the Faculty of the Graduate College, The University of Vermont, in partial fulfillment of the requirements for the degree of Doctor of Education, specializing in Educational Leadership and Policy Studies.

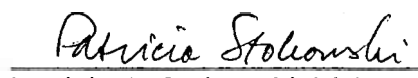
Dissertation Examination Committee:

 Advisor
Herman W. Meyers, Ph.D.


Kenneth N. Fishell, Ed.D.


Deborah Hunter, Ph.D.

 Chairperson
Susan A. Comerford, Ph.D.

 Interim Dean, Graduate College
Patricia A. Stokowski, Ph.D.

Date: March 23, 2009

ABSTRACT

This study examined the validity and reliability of the Extended Version of the Multidimensional Sportspersonship Orientation Scale (EMSOS; Stornes & Bru, 2002; Vallerand, Briere, Blanchard, & Provencher, 1997) for use among college athletes. The problem addressed by this study was the need for a well substantiated tool which demonstrates reliable and valid assessments of sportspersonship attitudes among U.S. collegiate athletes. Measuring tendencies towards good sporting behavior is valuable and necessary for the on-going study of the phenomenon of sportspersonship. There was a gap in the literature, however, as no instrument specific to the measurement of sportspersonship tendencies among U.S. college athletes had been validated for use among that population.

This was a case study involving a Catholic, liberal arts, residential, NCAA Division II college in New England, with an enrollment of approximately 2,000 students and a student-athlete population of 352. The survey was administered at team meetings by a research assistant not affiliated with the athletics program. The participants were assured of the anonymity and confidentiality of their responses and their ability to terminate participation at any time and for any reason without repercussion.

Results indicated that the EMSOS demonstrated acceptable validity and reliability among most subscales and as an overall instrument. The exception included one subscale, that of the “negative approach”. This subscale relates to participating in sport for extrinsic reasons, making excuses for poor performance, and being a poor sport. The negative approach subscale had unacceptable reliability and very weak correlation to the corresponding subscale, indicating weak construct validity. In addition, it appears that the addition of the sixth subscale (instrumental aggression) to the original version of the tool (the MSOS), improved the psychometrics of the instrument. Sportspersonship factors that emerged from the principal component analysis included “social convention & respect for rules/officials”, “instrumental aggression”, and “respect for opponents”.

Relationships between demographic variables and the global sportspersonship index were examined both with the EMSOS intact as well as with the “negative approach” subscale removed. These results, both with and without the “negative approach” subscale, suggested that male athletes, contact sport athletes, team athletes, and athletes with 15 or more years of involvement in competitive sports are more likely to have a negative sportspersonship orientation. The data also indicated that class year, age, and scholarship status did not necessarily result in different sportspersonship orientations.

This current study supports a modification of the EMSOS to exclude the “negative approach” subscale. This recommendation is made based on the problematic reliability and validity findings of that subscale. This study should provide researchers and practitioners with the knowledge that the revised EMOS appears to be a valid and reliable instrument that can be used to assess the sportspersonship orientations of U.S. collegiate athletes. The complexities and paradoxes surrounding the evaluation of sportspersonship are discussed in detail. Suggestions for future research to further explore sportspersonship in the collegiate setting are also provided.

ACKNOWLEDGEMENTS

I am grateful for the many individuals who have assisted me in this three-year journey. I wish to acknowledge and sincerely thank:

- My dissertation committee members – Dr. Bud Meyers, Dr. Ken Fishell, Dr. Deb Hunter, and Dr. Suzy Comerford for their expertise and advice.
- My dissertation advisor Dr. Bud Meyers – for his generosity, guidance, and constant encouragement.
- My UVM professors – in particular, Dr. Peg Single, Dr. Judith Aiken, and Dr. Susan Hazasi.
- The participating athletes who graciously agreed to take part in this study.
- Vice-President Michael Samara, President Emeritus Marc vanderHeyden, and President Jack Neuhauser for supporting my endeavors and granting released time from work.
- My friends and colleagues who generously offered assistance, especially Megan Ohler, Chris Gordon, Lindsay Pontieus, Kerri Leach, Dr. Dave Landers, Dr. Bob Simon, and Dr. Bob Vallerand.
- My cohort members – I am thankful for the many relationships I have been fortunate to have established and I am hopeful that our friendships will endure.
- My mother, brother, and sister who were always there to listen and support.
- My partner Jeanne for love and patience, encouragement, support, and sacrifice - putting some of our mutual dreams on hold so I could pursue this venture.

DEDICATION

To my parents

Sudie E. and Edward G. Knortz,

both of whom instilled in me

a strong moral compass,

a belief in myself,

and enduring persistence

and

To Jeanne

whose love and support has been

instrumental to my success

TABLE OF CONTENTS

ACKNOWLEDGEMENTS	ii
DEDICATION	iii
LIST OF TABLES	viii
CHAPTER 1: INTRODUCTION	1
Background of the Study	1
Statement of the problem	4
Purpose of the Study	5
Research Questions	5
Significance of the Study	7
Definitions of Terms	7
Scope and Limitations	11
Organization of the Dissertation	13
CHAPTER 2: REVIEW OF THE LITERATURE	14
Defining Sportspersonship	15
Theories Related to Sportspersonship Orientations	19
Social Cognitive Theory or Social Learning Theory	20
Structural Development Theory or Cognitive Developmental Theory	22
Social-Psychological View	25
Multiple Intelligences Theory	26
Differentiating Factors Related to Sportspersonship	28
Gender and competitive experience	28

Team Culture	29
Winning.....	30
Contact versus non-contact sports	31
Measuring Sportspersonship Attitudes	33
Defining Issues Test (DIT; 1979).....	34
Hahm-Beller Values Choice Inventory (HBVCI; 1989)	36
Rudd-Stoll-Beller-Hahm Value Judgment Inventory (RSBH; 1998).....	38
Multidimensional Sportspersonship Orientation Scale (MSOS; 1997)/Extended Version of the MSOS (EMSOS; 2002).....	40
Instrument Validity and Reliability	42
Psychometrics Overview	42
Validity	43
Reliability.....	45
Response Bias	45
Prior validation of the MSOS/EMSOS	47
Complexities and Paradox of Sport	53
Summary of Literature Review.....	58
CHAPTER 3: METHODOLOGY	62
Research Design.....	63
Population	63
Instrumentation	64
Data Collection Procedures.....	65

Data analysis	67
CHAPTER 4: RESULTS	70
Research Question 1: Descriptive Statistics	70
Research Question 2: Construct Validity – Principal Component Analysis.....	73
Research Question 3: Reliability - Cronbach alpha.....	76
Research Question 4: Construct validity – Pearson Correlation.....	79
Research Question 5: Concurrent Validity – Independent Sample t-tests.....	81
Other Results.....	86
Summary	89
CHAPTER 5: DISCUSSION.....	91
Research Questions and Related Topics	91
Research Question 1: Descriptive Statistics	91
Research Question 2: Construct Validity – Principal Component Analysis.....	91
Research Question 3: Reliability - Cronbach alpha.....	94
Research Question 4: Construct validity – Pearson Correlation.....	96
Research Question 5: Concurrent Validity – Independent Sample t-tests.....	97
Complexities and Paradox	101
Limitations	104
Conclusions.....	105
Implications.....	108
Recommendations for Future Research	112
Postscript Reflection	114

REFERENCES	117
APPENDIXES	129
Appendix A: EMSOS	129
Appendix B: Hypothetical Scenarios.....	131
Appendix C: List of Expert Panel Members.....	133
Appendix D: IRB Approval	134
Appendix E: Information Sheet	137
Appendix F: Survey Administrator Script	139

LIST OF TABLES

Table 1: Data Analysis Processes to Assess Validity and Reliability of the EMSOS	68
Table 2: Demographic Data	71
Table 3: Principal Component Analysis	75
Table 4: Subscale and Test Reliability.....	77
Table 5: Cronbach's Alpha if Item Deleted.....	78
Table 6: Correlation of EMSOS subscales to hypothetical scenarios.....	80
Table 7: Sex - Independent Sample t-test	82
Table 8: Contact/non-contact sports - Independent sample t-test.....	83
Table 9: Team/individual sports - Independent sample t-test.....	83
Table 10: Years of involvement in competitive sports – ANOVA.....	85
Table 11: Negative Approach Subscale Omitted: Independent sample t-test – Sex, Type Sport, Physical Nature of Sport.	88
Table 12: Negative Approach Subscale Omitted: One-Way ANOVA – Years Involved in Competitive Sports.....	89

CHAPTER 1: INTRODUCTION

Background of the Study

Sport has deep roots grounded in the Olympic ideal of honor and fair play.

Perhaps the best example of this is found in the Olympic Creed itself which states:

The most important thing in the Olympic Games is not to win but to take part, just as the most important thing in life is not the triumph but the struggle. The essential thing is not to have conquered but to have fought well (*Olympic Motto and Olympic Creed*, n. d.)

This passage provides an illustration of the sporting behavior standards touted in the early origins of sport. Josephson (1999), a leading authority on moral behavior, further clarified the Olympic ideal of competition as “the pursuit of victory in the spirit of sportsmanship and according to the rules that define the game” (p. 1).

As sports evolved, the notion of fair play became a central theme at all levels of competition (Shields & Bredemeier, 1995). Indeed, sports programs in the United States first became integrated into the educational system largely because of their potential to inherently contribute to personal growth, by “defining and perpetuating fair play, honesty, and winning and losing graciously” (Polley, 1981, as cited by Polley, 1983, p. 807). The character building aspect of sport in schools became introduced to students initially in physical education classes (Gibbons & Ebbeck, 1997; Shields & Bredemeier, 1995), with continued good sporting behavior taught as an element of interscholastic competition (May, 2001; Nisivoccia, 1997).

More recently, however, highlighted by ethical scandals, incidents of violence, and marked displays of unsporting-like behavior, the role of the Olympic ideal of honor and fair play in sport has been severely challenged (Lapchick, 2006; Lodl, 2005; Morgan, Meier, & Schneider, 2001; Papp & Pristoka, 1995). Although sport participation has the potential to foster the development of prosocial attitudes in participants, it may be failing at that ideal. According to Shields and Bredemeier (1995), “[i]n general, sport has done little to transform dominant social values to enhance personal development and promote social justice for a majority of participants” (p. 195). This contradiction presents a challenge to the belief that participation in sport inherently builds character and promotes the development of positive societal values. Since fair play is an historical and integral part of competition, the diminishment of this high standard is cause for great concern.

In an effort to understand this phenomenon, sportpersonship emerged as a worthy topic of study. Prior research had focused on the role that winning, gender, level of competition, or length of involvement in competitive sport plays in regard to sportpersonship tendencies (Allison, 1982; Papp & Pristoka, 1995; Proios, Doganism, & Proios, 2006). Other research explored the interplay between sportpersonship and motivational orientation and goal perspectives of sport participants (Duda & Nicholls, 1992; Gill & Deeter, 1988; Ryska, 2003). As well, researchers have taken an interest in investigating the effectiveness of intervention strategies to improve participant sporting behavior (Butler, 2000; Ennis et al., 1999; Gibbons & Ebbeck, 1997; Gibbons, Ebbeck, & Weiss, 1995; Nisivoccia, 1997; Wandzilak, Carroll, & Ansorge, 1988).

Although these studies relating to sportspersonship vary in focus, the common feature has been the need for researchers to both conceptualize and measure good sporting behavior. Indeed, the attempt to arrive at a widely accepted definition of sportspersonship itself has been the topic of many studies and scholarly writings (Arnold, 2003; Goldstein & Iso-Ahola, 2006; Keating, 2001; Polley, 1983; Simon, 2004; Vallerand, Deshaies, Cuerrier, Briere, & Pelletier, 1996). Defining sportspersonship has been the essential, sometimes difficult, first step used in prior studies related to sporting behavior.

In addition to the difficulties in reaching one widely accepted definition of sportspersonship, another difficulty lies in its measurement. Many different instruments have been used in various studies in attempts to measure an individual's propensity for good sporting behavior (Gill & Deeter, 1988; May, 2001; Rudd & Stoll, 2004; Wandzilak et al., 1988). Some of these tools however are generic rather than specific in nature, measuring broad moral or social values, reasoning, or development, rather than sportspersonship explicitly.

The one tool that was specific to sportspersonship, the Multidimensional Sportspersonship Orientation Scale (MSOS; Vallerand, Briere et al., 1997), was validated for use with a French-Canadian middle school population. There appears, however, to be a gap in the literature in the application of this validated tool specific to the measure of sportspersonship for the United States (U.S.) collegiate athlete population. As a result, researchers that study U.S. college athletes are unable to utilize the MSOS to measure sportspersonship tendencies as they may link to interventions, correlations to

motivational or goal orientations, or any other aspect of related interest. This current study addresses this gap by assessing the validity and reliability of an expanded version of the MSOS for a segment of U.S. collegiate athletes. The Extended Version of the Multidimensional Sportspersonship Orientation Scale (EMSOS; Stornes & Bru, 2002) contains all the elements of the MSOS, plus an added dimension depicting instrumental aggression. Both the MSOS and the EMSOS will be discussed in full detail in the literature review.

Before proceeding further with this present study, it is important to address the terminology to be used throughout this paper. Although earlier writings have used the term “sportsmanship” exclusively when discussing sporting behavior, more recent studies tend to use the more gender-neutral term “sportspersonship” (Shields & Bredemeier, 1995). Therefore, in citing prior studies, the original language used by researchers will be restated with the terminology directly referenced by the authors. However, consistent with American Psychological Association Manual (APA, 2001) guidelines on nonsexist language, sportspersonship will be the term used throughout this present study.

Statement of the problem

Measuring tendencies towards good sporting behavior is valuable and necessary for the on-going study of the phenomenon of sportspersonship. There is a gap in the literature, however, as no instrument specific to the measurement of sportspersonship tendencies among U.S. college athletes has been validated for use among that population. Therefore, the problem addressed by this study is the need for a well substantiated tool

which demonstrates reliable and valid assessments of sportspersonship attitudes among U.S. collegiate athletes.

Purpose of the Study

The purpose of this case study was to examine the validity and reliability of a recently developed and expanded tool to measure sportspersonship, the Extended Version of the Multidimensional Sportspersonship Orientation Scale (EMSOS; Stornes & Bru, 2002; Vallerand, Briere et al., 1997) for use among college athletes at a Catholic, liberal arts, residential, NCAA Division II college in New England. Although the EMSOS has been normed to the middle-school population, its use for research with college athletes has been restricted until the validity and reliability of the instrument with this population can be demonstrated. This study therefore sought to determine if the EMSOS could be a useful tool to measure collegiate athlete sportspersonship tendencies by determining acceptable reliability and validity of the instrument.

Research Questions

This study explored the following primary research question:

- Is the Extended Version of the Multidimensional Sportspersonship Orientation Scale a valid and reliable measure of sportspersonship tendencies of U.S. collegiate athletes?

Secondary questions and null hypotheses related to the primary research question include:

- Q1: What are the responses to the survey questions relative to the demographic characteristics? [descriptive statistics]

- Q2: Do results from this sample yield a pattern of factors similar to the factor analysis results of previous research studies? [construct validity]

Null Hypothesis (H_0): There is no difference in the pattern of factors yielded from this study when compared with the pattern of factors yielded from the previous research.

- Q3: Does the internal consistency of the instrument match that of previous research attempts? [reliability]

Null Hypothesis (H_0): There is no difference in the measures of internal consistency yielded from this study when compared with the measures yielded from the previous research.

- Q4: To what extent do the EMSOS subscale results correlate with the corresponding hypothetical scenario results? [construct validity]

Null Hypothesis (H_0): There is no statistically significant correlation with the EMSOS subscale scores and the corresponding hypothetical scenario scores.

- Q5: Do the instrument scores agree with trends from previous research studies as they relate to demographic variables (sex, sport, class year, age, level of competitiveness, or number of years involved in competitive sports)? [concurrent validity]

Null Hypothesis (H_0): There is no statistically significant difference between groups of intercollegiate student-athletes formed by the demographic variables of sex, sport, class year, age, athletics scholarship, or number of years involved in competitive sports (or not), with respect to higher sportspersonship tendencies, as measured by the EMSOS global sportspersonship index.

- Q6 [If less than 75% return rate]: Is there a significant difference in results generated by respondents versus a model which includes “worst-case scenario” scores for non-respondents? [non-respondent bias]

Null Hypothesis (H_0): There is no statistically significant difference between groups formed by respondents and non-respondents, with respect to higher sportspersonship tendencies, as measured by respondent EMSOS scores and a model which includes “worst-case scenario scores” for non-respondents.

Significance of the Study

The findings of this study inform the current body of research regarding the measurement of sportspersonship tendencies within the collegiate athlete population. With the finding that the EMSOS is a valid and reliable tool, it could be available to researchers for further studies related to intervention strategies to improve sporting behaviors among college athletes. In addition, the EMSOS could provide information for researchers to examine relationships between sportspersonship tendencies among collegiate athletes and other variables such as motivational orientation, competitiveness, and achievement goals.

Definitions of Terms

The following operative definitions are used for this research study:

Athletics – “The competitive experience of sport whereby coaching is essential with spectators being present, and with specific, proscriptive, and sportsmanship rules highly

developed within an organized structure. The experience is often likened to that of work with decided aspects of dedication, intensity, and sacrifice” (Center for Ethics, 2005).

Character – “A moral demeanor that refers to one’s outward demeanor as judged by society. Positive moral character refers to one’s ability to know the right and have the courage to follow the right. Character refers to one’s virtue, or how one lives by a set of moral values. A person of character is one who is known to be honest, just, fair, and decent to others. A person of honor and integrity” (Center for Ethics, 2005).

Contact and noncontact sports – “...contract sports include wrestling, boxing, rugby, ice hockey, football, basketball, or any other sport in which bodily contact is its purpose or major activity” (Acosta & Carpenter, 2005, p. 43).

Courteous – “Polite, respectful, and considerate” (Oxford Online Dictionary, n.d.).

Divisional Status – Institutions offer intercollegiate programs at one of three divisions within the NCAA: Division I (DI), Division II (DII), and Division III (DIII). The distinguishing factor between divisions is the awarding of athletics scholarships, with DI offering the most athletics scholarships, DII offering a more limited number of athletics scholarships, and DIII offering no athletics scholarships (NCAA, n.d.-a).

Fair play – “Respect for the rules or equal treatment of all concerned” (Oxford Online Dictionary, n.d.).

Gamesmanship – “The perspective of pushing the rules to the limit, without getting caught, using whatever dubious methods to achieve the end” (Center for Ethics, 2005).

Global Sportspersonship Index – A number that averages scores on each of the six EMSOS subscales and adds the means, after reverse coding the negative approach toward participation and instrumental aggression subscales. (Vallerand & Losier, 1994).

Honesty – “The quality of being honest” with honest defined as “free of deceit; truthful and sincere” (Oxford Online Dictionary, n.d.).

Individual Sport – the NCAA identifies varsity collegiate individual sports as: archery, badminton, bowling, cross country, equestrian, fencing, golf, rifle, skiing, squash, swimming and diving, track and field, and wrestling (NCAA, 2007b).

Length of involvement with competitive sports – the number of years an individual identifies as having played an organized sport where there was scored competition against other organized teams or individuals.

Life Skills – the term used by NCAA to define the established program with goals that include: meet the changing needs of student-athletes; promote respect for diversity and inclusion among student-athletes; assist student-athletes in identifying and applying transferable skills; enhance partnerships between the NCAA, member institutions and their communities for the purpose of education; foster an environment that encourages student-athletes to effectively access campus resources; encourage the development of character, integrity and leadership skills (NCAA Life Skills, 2007).

Moral – “The moral perspective in which one knows the good, proper, and right. The moral perspective is played out through one’s motives, intentions, and actions as they impinge on or affect other human beings” (Center for Ethics, 2005).

Moral development – “The evolving growth process by which one learns to take others into consideration in making moral decisions. Moral development is usually considered to occur through six different stages in three different levels, from a low reasoned perspective to a greater reasoned perspective” (Center for Ethics, 2005).

Moral reasoning – “The ability to systematically think through a moral problem taking into consideration one’s own values and beliefs while weighing them against what others and society values and believes” (Center for Ethics, 2005).

Respect – “The moral value in which one holds someone or something in high regard” (Center for Ethics, 2005).

Responsibility – “The moral value in which one is answerable, accountable and possibly liable for actions in the past, present, and future. A statement of character that one is trustworthy to carry out deeds” (Center for Ethics, 2005).

Rules – “Individual day-to-day moral guidelines which can be written or unwritten by the individual. Rules are divided into three different types: constitutive rules, proscriptive rules, and sportsmanship rules. Constitutive rules are those rules that guide play within a specific game. Proscriptive rules are game rules that expressly forbid specific actions. Sportsmanship rules are rules of conduct that are to be followed while in the game and out of the game” (Center for Ethics, 2005).

Spirit of a rule – “Usually refers to the intent of a sportsmanship rule or what was intended by the rule. No rule can take into consideration all possibilities, hence the spirit of the rule is to cover the possibilities” (Center for Ethics, 2005).

Sportsmanship – “The quality inherent in playing a game in which one is honor bound to follow the spirit and letter of the rules. Sportsmanship rules are rules of conduct, explicitly written or implicitly believed, that adhere to this principle” (Center for Ethics, 2005).

Sportspersonship – The multidimensional definition identified by Vallerand et al. (1996) includes: “Full commitment - referring to a respect for personal improvement through maximal effort and recognizing one’s mistakes as a learning opportunity; Social conventions - referring to an athlete’s respect for the sport and his or her engagement in prosocial behaviors within the competitive sport context; Rules and officials - referring to an athlete’s respect for, and willingness to abide by, the rules of the sport and the officials who enforce them; Negative approach - referring to the extent to which an athlete reacts negatively to his or her sports participation; and Opponent dimension - referring to the level of respect and concern an athlete holds for his or her opponent” (p. 89).

Team Sport – the NCAA identifies varsity collegiate team sports as: baseball, basketball, field hockey, football, ice hockey, lacrosse, rowing, rugby, soccer, softball, synchronized swimming, team handball, volleyball, and water polo (NCAA, 2007c).

Varsity Intercollegiate sport – the NCAA defines this as a sport that has been accorded this status by the institution and whose student-athletes are reviewed and certified annually according to NCAA regulations (NCAA, 2007d).

Scope and Limitations

As with all research, this study has several limitations. As a case study, the results are directly applicable only to the student-athletes at the institution studied. Attempts to

generalize the results to a broader population must be done with caution. Demographic, geographic, and campus culture variables unique to the institution under study could limit the ability to apply the results directly to other institutions of higher education. However, schools with a similar community profile may indeed draw limited generalizations regarding applicability to their institution.

Other important limitations include potential issues related to the use of a survey instrument in gathering data which is self-reported attitudinal information from subjects on a complex topic. The survey process might not have provided the respondents with the opportunity to clarify or further explore questions before answering. In addition, it is sometimes difficult to express opinions or views on a five-point scale rather than through a verbal response.

There is also the risk on any self-reported assessment that the results may be vulnerable to the reporting of socially desirable responses. The intended behavior reported by the subjects may also not be consistent with their real-life actions. In order to moderate these potential limitations, the participants were assured anonymity and were encouraged to answer the questions with full honesty.

While a high response rate was expected, if that were not to be achieved it would create limitations for the study. Participation was therefore encouraged by the offer of an incentive. A \$500 donation to the Make a Wish Foundation (the Student-Athlete Advisory Council charity of choice), was offered if 75% of all student-athletes participated in the study.

Finally, the operational definitions of the variables create limitations for the study. Specifically, sportpersonship is a complex, multidimensional phenomenon which is not easily conceptualized and defined. This limitation was minimized by exploring definitions in the literature review and clearly defining terms in the methodology section. Nonetheless, the many possibilities of broad interpretation present a challenge to the study and analysis of sportpersonship responses.

Organization of the Dissertation

This dissertation is organized in chapters, each with a specific focus. Chapter 2 is a review of the literature, including the sportpersonship definition, theoretical views, measurement tools, instrument validity and reliability, and prior validation of the MSOS. A summary of the related literature provides a framework for proceeding with the current study. Chapter 3 includes the methodology as well as information related to sample, variables, instrumentation, data collection, and analysis. Results of the study are provided in chapter 4. Chapter 5 outlines the findings, implications, and recommendations for further research.

CHAPTER 2: REVIEW OF THE LITERATURE

Prior research has provided essential information which assists in the understanding of the many issues related to the validation process for the Multidimensional Sportspersonship Orientation Scale (MSOS; Vallerand, Briere et al., 1997) and the Extended Version of the Multidimensional Sportspersonship Orientation Scale (EMSOS; Stornes & Bru, 2002). In outlining this literature, the challenge in defining sportspersonship was first considered, along with its complex interpersonal and multidimensional nature. Second, the theoretical views that inform the current thinking about sportspersonship orientations were outlined. Third, the differentiating factors related to sportspersonship were explored. Fourth, the instruments that have been used to measure sportspersonship tendencies in previous studies were examined. Fifth, the important aspects related to sportspersonship instrument validity and reliability were outlined. Finally, research related to the prior validation of the MSOS/EMSOS as well as the complexities surrounding sportspersonship were considered. Each of these sections helps to inform the focus and direction of this current study.

It should be noted that this literature review focuses on the sporting behaviors of the participants rather than that of the fans or other constituents. In addition, while other related topics such as the use of performance enhancing substances, gambling, and physical violence can certainly be regarded as negative aspects of sporting behavior, they were not considered in this paper. Instead, this review predominately addresses

sportspersonship as it relates to the concept of respect for the game, opponents, and officials.

Defining Sportspersonship

Central to the study of sportspersonship is the need to clearly define it. Past studies have, however, revealed a significant challenge in doing so. Goldstein and Iso-Ahola (2006) illustrated this point when they stated “[i]n today’s sporting culture, most people would find it difficult to give a clear definition to the term [sportsmanship] and would defer to the ‘I know it when I see it’ approach” (p. 18).

Keating (2001) proposed that the common tendency when defining sportspersonship is to either broaden the concept so it becomes an “all-embracing moral category...the pinnacle of moral perfection” (p. 10), or to view it as a “moral-minimum – one step this side of criminal behavior” (p. 10). Ultimately Keating advocated for the definition for sportsmanship as “conduct becoming a sportsman” (p. 12), where “a sportsman is a person who can take loss or defeat without complaint or victory without gloating and who treats his opponents with fairness, generosity, and courtesy” (p. 12). Keating claimed that the essence of genuine sportsmanship is based on the conduct and attitude that are proper to attaining the goal of sport. That goal, he believed, is to “derive pleasure from the attempt to [win] and to afford the pleasure to one’s fellow participants in the process” (p. 13). However, Keating uniquely distinguishes this sportsmanship expectation (affording pleasure to opponents) as one applicable to recreational sport but not feasible in highly competitive athletics. Keating proposed that the goal of competitive athletics is “honorable victory” (p. 12) and that fair play and equal application of the

rules, along with “modesty in victory and a quiet composure in defeat” (p. 19) enhance that goal.

Similar definitions have emerged from other studies. Polley (1983) stated that “sportsmanship requires the athlete to demonstrate fair play, plus behave in a way to show by action, concern for an opponent” (p.808), with fair play defined as playing within the established rules for the sport. Arnold (2003) included magnanimity, respect, affability, compassion, altruism, and generosity as elements of sportsmanship. For Feezell (1986), sportsmanship requires athletes to act in a responsible manner as an expression of fair and just competition. Freezel (1988) also advocated that sportsmanship should be a balance between excessive seriousness and excessive playfulness or frivolity.

Still another study defined good sportsmanship as “a matter of being good (character) and doing right (action)” (Grough, 1997, p. 21 as cited by May, 2001, p. 373). Shields and Bredemeier (1995) stated that “sportspersonship involves an intense striving to succeed, tempered by commitment to a ‘play spirit’, such that ethical standards will take precedence over strategic gain when the two conflict” (p. 194). Each of these definitions provided slight variations and nuances in the interpretation of what constitutes good sporting behavior.

The National Collegiate Athletic Association (NCAA), the leading organizational authority on collegiate sport, defines sportsmanship as “the set of behaviors to be exhibited by athletes, coaches, officials, administrators and fans (parents) in athletic competition...based on such fundamental values as respect, fairness, civility, honesty, and responsibility (NCAA, 2003, p.15). Furthering this concept, the NCAA by-laws

require participants, coaches, and administrators to abide by a code of ethical conduct which consists of “a set of guiding principles which each person follows the letter and spirit of the rules” where “such conduct reflects a higher standard than law because it includes, among other principles, fundamental values that define sportsmanship” (NCAA, 2003, p. 15).

While defining sportpersonship is stated by many to be a difficult task (Vallerand et al., 1996; Wandzilak et al., 1988), it appears that most definitions are similar in their focus on participant respect for themselves, the opponents, and the rules of the sport. Sportpersonship definitions often cite the expectation that one treats his or her opponents with fairness, generosity, concern, and courtesy (Keating, 2001; Polley, 1983). As well, abiding by both the “letter and spirit of the rules” (NCAA, 2003, p. 15) and acting with grace and composure in both victory and defeat (Keating, 2001) are key aspects of good sporting behavior.

Amidst the various, but similar, definitions of sporting behavior, Vallerand et al. (1996) conducted a study that sought to clarify the exact definition of sportpersonship. The researchers applied prior findings on moral reasoning to their study by measuring perceptions of sportpersonship in “naturally occurring situations” (p. 91). A survey study was conducted using a stratified random sampling of teams with 10-18 year old participants ($N=1,056$) within the Quebec sports organizations selected. The athletes were asked to “relate the extent to which various items pertained to the concept of sportsmanship” (p. 96). Five factors emerged as perceived parts of sporting behavior:

1. Full commitment - referring to a respect for personal improvement through maximal effort and recognizing one's mistakes as a learning opportunity
2. Social conventions - referring to an athlete's respect for the sport and his or her engagement in prosocial behaviors within the competitive sport context
3. Rules and officials - referring to an athlete's respect for, and willingness to abide by, the rules of the sport and the officials who enforce them
4. Opponent dimension - referring to the level of respect and concern an athlete holds for his or her opponent
5. Negative approach - referring to the extent to which an athlete reacts negatively to his or her sports participation (Vallerand et al., 1996, p. 89).

The Vallerand et al. study (1996) emphasized two aspects that were not often included in the earlier definitions. These important aspects were the interpersonal and the multidimensional nature of sportspersonship. This 1996 study also formed the basis for the subsequent development of a tool, the MSOS (Vallerand, Briere et al., 1997). This instrument measures sportspersonship tendencies and is the primary tool being evaluated in this present study for validity and reliability for use among the U.S. collegiate athlete population.

The question of whether the dimension of instrumental aggression should be added to this multidimensional definition of sportspersonship was considered by Stornes & Bru (2002) in their research with adolescent handball players. They found that

antisocial behavior such as instrumental aggression, often in the form of intimidation, was prevalent in sport. Instrumental aggression includes aggressive or assertive play, but does not include intentionally injurious acts, which is generally considered outside moral norms (Bredemeier & Shields, 1984b; Stornes & Bru, 2002).

According to Stornes and Ommundsen (2004) opinions vary as to whether athletic aggression should be regarded as unfair play or as socially acceptable assertiveness in competitive sport. Ultimately, since instrumental aggression has socio-moral implications, Stornes and Bru (2002) included it as part of their definition of sportpersonship. They subsequently created the Extended Version of the Multidimensional Sportpersonship Orientation Scale (EMSOS; Stornes & Bru, 2002), which includes all aspects of the MSOS plus a sixth dimension, that of instrumental aggression. Because it provides the opportunity to evaluate a more complete instrument, the EMSOS instrument is the version that was utilized for this current study.

Theories Related to Sportpersonship Orientations

The literature outlining the broad topic of ethical or moral theory is quite extensive. It includes the historical foundation and philosophical basis of moral thought or moral reasoning as well as that of moral development. The moral reasoning theories identify numerous models which provide a structure that guides individual decisions about what to do and how to be. These theories, to name a few, include moral relativism, natural law, divine command, existentialism, utilitarianism, moral pluralism, justice, and Kantianism (Driver, 2007; Graham, 2004; Rawls, 1971; Timmons, 2002). Each theory provides a basis or justification for moral decision-making and behaviors. Alternatively,

the moral development theory literature considers a different but related aspect, that of the ways or structures in which individuals progress in moral growth. Since this aspect was most pertinent to this current study of sportspersonship orientation, social and moral learning theory were the focus of this section.

Three broad theoretical perspectives have informed our current knowledge about sportspersonship development: the social cognitive theory (Bandura, 1977, 1986), the structural development model (Haan, 1983; Kohlberg, 1976; Piaget, 1932/1965), and the social-psychological model (Vallerand & Losier, 1994). In addition, the literature outlining the theory of multiple intelligences (Gardner, 1983), and in particular social intelligence (Goleman, 2006) contributes to the conversation about sportspersonship orientations. Each of these theories has impacted the research related to sporting behavior in addition to the instruments designed to measure it.

Social Cognitive Theory or Social Learning Theory

The social cognitive theory or social learning is most associated with the work of Bandura (1977). Social learning theorists describe moral development in terms of how individuals conform to social convention (Weiss & Bredemeier, 1990), or how individuals internalize the norms and conventions of a group. These theorists contend that modeling and reinforcement are the processes by which individuals develop morally (Gibbons et al., 1995). According to Bredemeier, Weiss, Shields, & Shewchuck (1986) the social learning theorists posit that “programmes [sic] in moral education should be based on the systematic use of such learning processes as operant conditioning (Aronfreed, 1968), reinforcement (Mischel & Moore, 1966) and modeling (Bandura,

1977)” (p. 213). “Thus, an athlete’s moral understanding of sport behavior is thought to be a result of such factors as the coach’s differential reinforcement, perceived fan expectations, and behavioral modeling of other athletes” (Bredemeier & Shields, 1984b, p. 139).

Accordingly, the moral learning that occurs in sport settings affects participants’ development and beliefs about sporting or unsporting behaviors. Research aligned with the social cognitive theory has found that through modeling and reinforcement, key adult figures or significant others (i.e., parents, coaches, referees, and other team members) play an important role in developing sporting behaviors in participants (Goldstein & Iso-Ahola, 2006; May, 2001; Shields, Bredemeier, Gardner, & Bostrom, 1995). The media outlets may also play a role in the development of sporting behaviors.

Aicinena (1999) studied the role of the sports media in potentially impacting the sportsmanship behaviors of viewers. Comments made during an ESPN program that covered predominately male professional and collegiate sport contests were recorded over a three and one-half month period of time. Based on the overriding prevalence of commentators remarks referencing bad sporting behavior, the author concluded that “telecasts would do little to lessen the incidence of bad sportsmanship, violence, or immoral behavior currently associated with modern American sport and instead, may lead to an increased frequency of such behavior” (p. 2). By the media creating or portraying behaviors as the norm or accepted social convention, social learning theorists would contend that news outlets contribute to shaping the moral development of viewers.

Structural Development Theory or Cognitive Developmental Theory

Piaget's (1932/1965) early work in observing and analyzing how children interact in a game context established the basis for the developmental nature of moral judgment. He identified three stages through which children progress in their moral development – constraint, cooperation, and generosity (Piaget, 1932/1965). Kohlberg (1976) expanded beyond Piaget's work with young children to focus on adolescent moral judgment, particularly among adolescent boys.

By constructing moral dilemmas that placed socially accepted values in conflict, Kohlberg highlighted the role that cognitive disequilibrium played in the promotion of moral development. “For Kohlberg, justice is the principle that best fits the formal criteria for moral adequacy... and moral development is a progression through an invariant series of moral stages, with each stage of growth increasingly approximating the justice orientation” (Bredemeier & Shields, 1986a, p. 17). Kohlberg identified six stages of moral development relative to justice, with each successive stage sequentially reflecting more advanced development. These stages were organized into three general levels: preconventional, conventional, and postconventional (Kohlberg, 1976). According to Gilligan (1981),

[p]reconventional judgment is egocentric and derives moral constructs from individual needs; conventional judgment is based on the shared moral values that sustain relationships, groups, communities, and societies, while postconventional judgment adopts a prior-to-society perspective and constructs moral principles that are universal in application (p. 142).

While the stages identified by Kohlberg were widely accepted, further research revealed issues with the scale because of significant differences between responses from men and women (Gilligan, 1982).

Gilligan (1982) contends that this difference reflects the phenomenon that women define themselves in a context of human relationship and judge themselves in terms of their ability to care. She observed that Kohlberg's (1976) study, with subjects limited to adolescent boys, omits some groups, including women, who were found to be deficient in moral judgment according to his scale. Women's moral development is more centered around the understanding of responsibility and relationships, rather than the understanding of rights and rules (Gilligan, 1982).

An alternate structural development approach was developed by Haan (1983; Haan, Aerts, & Cooper, 1985), one which emphasized social construction and moral dialogue with others as key components to achieve moral balance. According to Bredemeier and Shields (1986b), Haan's interactional model differed from Kohlberg's model because:

(a), it reflects a broad interpretation of structuralism rather than a strict cognitivist view (b) it emphasizes an individual's increasing ability to inductively construct moral agreements with others rather than focusing on an individual's capacity to deductively reason from universal, moral principles; (c) it identifies social disequilibrium rather than cognitive disequilibrium as the primary stimulus for moral growth; and (d) it is more closely tied to moral behavior and therefore better suited to study action contexts like sport (p. 10).

Haan et al. (1985) outlined five levels of morality that individuals pass through developmentally. These stages were identified as self-interest, ego-centric outlook, altruism/adherence to the “golden rule”, mutual interest, and welfare of all concerned parties. The authors contend that development progresses from an assimilative, egocentric perspective (Levels 1 and 2), to an accommodative, other-oriented perspective (Levels 3 and 4), until an equilibrium is reached at Level 5. With regard to the sex differences discussed earlier with Kohlberg’s scale, the Bredemeier and Shields (1986b) study utilizing Haan’s scale found females’ reasoning was higher, or more mature than males, in both sport and life. They posit that women’s tendency to emphasize human connection over individuation (Gilligan, 1982) may discourage the adaptation of the lower egocentric orientation identified by Haan.

Regardless of which scale is promoted, Piaget, Kohlberg, Haan, and other structural-developmental theorists rely on a stage-defined structure to measure progress. They define moral development as an individual behaving in harmony with one’s most mature moral reasoning patterns (Stornes & Bru, 2002; Weiss & Bredemeier, 1990). These theorists also contend that development occurs through moral dialog with others and by personally experiencing and resolving dilemmas or conflicts.

Contrary to the social learning theory, the cognitive-development paradigm argues that “[t]he environment, rather than being the prime or sole determinant of behavior, is one pole involved in a dynamic process. Accommodations to the environment are assimilated into the individual’s already existing organized patterns of meaning” (Bredemeier & Shields, 1984b, p. 139). Cognitive moral developmental

proponents believe that “morality is learned; learning has a definitive, cognitive process, and; if learned, morality can be taught, and; if taught, morality or the process of thinking about morality can be measured” (Stoll & Beller, 1998, p. 22).

Much of the sporting behavior research that conceptually aligns with the structural-development theory focuses on assessing the moral reasoning of athletes, and in some cases comparing it to that of non-athletes. One seminal study explored whether individuals make different moral decisions in a competitive sport setting as opposed to a general life setting (Bredemeier & Shields, 1984a). The researchers showed that in the context of sport, a special form of bracketed morality may occur in which ethical sport dilemmas would elicit lower levels of moral reasoning than ethical dilemmas presented within the everyday life contexts. They posited that the competitive strategic setting of sport may encourage the “temporary adoption of egocentric morality” (p. 356).

Social-Psychological View

The most recent theoretical approach to sportspersonship has included a social-psychological focus, which embraces several propositions related to the definition of sportspersonship, the role of social determinants, and the motivational style of the participant (Vallerand & Losier, 1994). To begin with, Vallerand and Losier advocated for a clear distinction between the elements of sportspersonship orientations, the development of sportspersonship orientations, and the display of sportspersonship behaviors. The orientations relate to the self-perceptions about sporting behaviors, the development refers to the process by which one develops sporting behaviors, and the display is concerned with the exhibited behaviors. Vallerand and Losier (1994) also

advocated for an integrated approach to the study of sportspersonship because of the learning that occurs through interactions with teammates, opponents, parents, and coaches in the “consensual agreement regarding the nature of sportsmanship” (p. 231).

Next, the social-psychological approach included social determinants as a major factor in predicting sportspersonship behaviors. These may involve such factors as cultural expectations, structural features (e.g., team versus individual sports), interpersonal influences (e.g., collective team norms and team cohesion), or situational aspects (e.g., costs and benefits of behaviors). Finally, the social-psychological model considered motivational orientation of the participant as a critical aspect of sportspersonship. In particular, the self-determination perspective, whether an individual is motivated by intrinsic or extrinsic rewards, is viewed as a key component to the display of sporting behaviors (Vallerand & Losier, 1994).

Multiple Intelligences Theory

Gardner’s (1983) theory of multiple intelligences builds upon the purview of the cognitive and developmental theories by broadly defining human intellectual competencies to include multiple criteria for intelligence. To begin with, Gardner defined an intelligence as “the ability to solve problems, or to create products, that are valued within one or more cultural settings” (Gardner, 1983, p. x). Gardner (1983) is critical of Piaget’s work for what he terms Piaget’s “monolithic emphasis” (p. 20) on one form of intelligence.

Gardner identified eight distinct criteria for intelligences which include the different kinds of abilities valued by human cultures. The one criteria most closely related

to the development of sporting behaviors is that of the “personal intelligences” (Gardner, 1983, p. 237), or those related to a sense of self, both inward and outward. It is the intrapersonal aspect that relates to examining and knowing one’s own feelings, while the interpersonal aspect relates to others’ feelings.

According to Gardner (1983), differences in personal intelligences can be discerned across cultures, where the relative emphasis on the intrapersonal and the interpersonal aspects may vary significantly. Distinct cultures may therefore strongly govern and maintain one’s relation to self and others. Ultimately, the sense of self becomes a “balance struck by every individual – and every culture – between the promptings of ‘inner feelings’ and the pressures of ‘other persons’” (Gardner, 1983, p. 242).

Similar to Gardner’s work on personal intelligences, Goleman’s (2006) writings focus on the social aspect of intelligence. In defining social intelligence, Goleman incorporates aspects of social awareness including primal empathy, attunement, empathetic accuracy, and social cognition, as well as social facility including synchrony, self-presentation, influence, and concern. Goleman identifies the term “social brain” (p. 324) as the “widely distributed circuitry of the brain” (p. 324) that are active during social interactions.

An interesting aspect of Goleman’s (2006) work is his discussion of Baron-Cohen’s distinction between the “extreme male brain” (p.139), and the “extreme female brain (p. 139), relative to empathy and understanding of others’ thoughts and feelings (Baron-Cohen, 2003, as cited by Goleman, 2006). Baron-Cohen argued that those with

the ultrafemale pattern brain excel at empathizing compared to the “empathy-stunted” extreme male brain. Nonetheless, he also acknowledged that the majority of both men’s and women’s brain are in the same ability range, and that the optimal pattern is one balanced with strengths in both empathizing and systematizing.

Whether one uses the term personal intelligence or social intelligence, good sporting behavior is reflective of the human capacity to care about self and others. The theory related to these multiple intelligences builds upon previous theories of social learning and development. In addition, the possible gender and culture differences in interpersonal or social intelligence have the potential to affect sportpersonship behaviors of sport participants.

Differentiating Factors Related to Sportpersonship

Several studies have focused on different factors that might affect the display of good sporting behaviors. Researchers have investigated whether aspects such as gender, competitive experience, team culture, level of physical contact, or emphasis on winning might have a correlation with sportpersonship behaviors of participants. The literature provides significant enlightenment into the multidimensional nature of sporting behavior and the complexity of the study of sportpersonship.

Gender and competitive experience

A study by Allison (1982) considered the role of gender in addition to the length of involvement in competitive athletics in evaluating sporting behavior. The hypothesis proposed was that “there are distinct normative systems operating within sport which vary according to the sex and institutionalized competitive experience of the subjects” (p.

154). A questionnaire was administered to subgroups of college athletes, high school athletes, and non-athletes. The data showed statistically significant mean differences between the groups, with the non-athletes/female athletes demonstrating a more sporting-like attitude. However, the author identified a major limitation of this study (and others) in that it lacked a clear definition of sportsmanship. Allison stated that this especially applies when there might have been a game-related or rule-oriented reason for an “unsportsmanlike” response. The data did indicate minimally that the sport participants were operating among different norms, leading Allison to propose that the “normative boundary of sport seems to be fluid and flexible rather than rigid and fixed” (p. 163).

Proios, Doganis, and Proios (2006) also found that sex, level of competitiveness, and the school environment were all relevant factors to sportspersonship attitudes. The researchers studied high school students in physical education, recreational sports, and interscholastic sports, using the MSOS. Results showed that girls had higher ratings of sportspersonship on the subscales related to commitment, social convention, rules and officials, and opponents. In addition, participants in competitive sports had higher ratings than participants in physical education class or recreation in all attitudes except those towards the opponent. Contrary to other studies, these researchers contended that sports in general “support[s] children’s moral development as well as their social adaptation” (p. 104).

Team Culture

A study by Shields, Bredemeier, Gardner, and Bostrom (1995) investigated the relationship of collective team norms regarding cheating and aggression with the coach’s

leadership style and team cohesion. The authors hypothesized that a high level of team cohesion would likely result in a shared common understanding of behaviors like cheating. The analysis showed that cheating and aggression are generally “more expected at the college level...and by males, older athletes, and those more experienced in sport” (p. 333). The researchers further found that “team cohesion...was positively related to expectations that peers would cheat, aggress, and that the coach would condone cheating” (p. 334). The team and coach both played an important role in establishing a team moral standard in this study.

The social context, including a team sport versus an individual sport setting, was found to contribute to a lower sportspersonship orientation (Vallerand, Deshaies, & Cuerrier, 1997). This was attributed to the social pressure team-sport athletes are subjected to from their environment to win. According to Vallerand, Deshaies et al. (1997) the team-sport athlete would “rather be celebrated as a hero for helping the team win than be criticized for having thought of an opponent first and consequently for having let the team down” (p. 135).

Winning

Papp and Pristoka (1995) examined the place sportsmanship holds in the structure of ethical values by analyzing elementary, secondary, and university students’ value orientations toward sport. The survey attempted to measure the students’ conceptual knowledge of sportsmanship and the value-orientation of the students. The results indicated that “there is a contradiction between success-orientation and sportsmanship” (p. 383), and “negative values of sport ethic have developed in those students who

regularly take part in sport” (p. 383). Among the population studied, the more that winning was accentuated or valued, the less sportsmanship was evident, and this was more so for athletes than non-athletes. Papp and Pristoka contend that the values that are learned from participation in sport are often contrary to fair play, and they appealed to sport leaders to “place a greater emphasis on the enculturation of sound ethical behaviour [sic] through sport” (p. 375).

According to Feezell (1988), poor sportsmanship is a result of an exaggerated emphasis on victory, which minimizes the play-spirit that is an important part of sports.

The policy of winning at all costs is the surest way of snuffing out the spirit of play in sport. The fallout of such a policy is the dreary succession of firings in college and professional sport. Such an emphasis on victory detaches the last moment from the whole game and fixes the outcome apart from its proper context. It reduces the appreciation of the performance, threatens the proper disposition towards the rules, and turns the contest into a naked power struggle.

(Schmitz, 1979, as cited by Feezell, 1988, p. 259)

Feezell (1988) believed the over-emphasis on winning also goes hand-in-hand with how participants view their relationship to opponents, a key component of sporting behavior. When the message is that the outcome is most important, the “win at all cost” principle becomes evident (Volkwein, 1995).

Contact versus non-contact sports

Few researchers have isolated specific types of sport in their consideration of sportspersonship tendencies, tending to generalize findings without considering the

potential for the complex roles and relationships unique to certain types of sports. Bredemeier, Shields, Weiss, and Cooper (1986) investigated the relationship between participation in higher contact sports and moral tendencies in young middle-school athletes at a university summer sports camp program. The findings showed that youngsters' participation and interest in higher contact sports were positively correlated with less mature moral reasoning and greater aggression tendencies. The authors proposed that "involvement in sports characterized by a relatively high degree of physical contact may be developmentally counterproductive for most preadolescent children" (p. 316), since it "provides little stimulus for – and may even impede – moral growth" (p. 316).

The instrumental aggression present in contact sports may play a role in sportpersonship tendencies in participants. According to Bredemeier and Shields (1986a), contact sports provide a context in which aggressive play is often rewarded. Russell (1993) also stated that

Outside of wartime, sports is perhaps the only setting in which acts of interpersonal aggression are not only tolerated but enthusiastically applauded by large segments of society. It is interesting to consider that if the mayhem of the ring or gridiron were to erupt in a shopping mall, criminal charges would inevitably follow. However, under the umbrella of "sport," social norms and the laws specifying what constitutes acceptable conduct in society are temporarily suspended. (p. 181).

Acts of instrumental aggression serve as a means to a particular goal (i.e. winning), and are often impersonal and designed to limit the effectiveness of opponents (G. Russell, 1993). The physical nature of contact sports therefore provides the venue for instrumental aggression to play a role in sporting behaviors.

Measuring Sportspersonship Attitudes

Amidst the varying definitions and theories surrounding sportspersonship, researchers developed several tools to measure tendencies or orientations. These tools varied in focus, content, and method. The instruments were developed to measure moral reasoning, moral character, moral development, and moral actions, in addition to social character, perception of sportspersonship, and propensity towards good sporting behaviors. Reflective of the identified theories that informed the thinking about sportspersonship, the methodologies of these instruments involved subjects responding to hypothetical scenarios, dilemmas, and value statements. From these variations, the tools provide insight into the historical process of their development.

This section is not intended to be a comprehensive reporting of all instruments ever used by researchers to measure sporting behaviors. Rather, it provides a chronological record of those established tools most often utilized in prior research studies involving athletics, sporting behavior, sportspersonship, moral reasoning or moral development, and the context of the instrument used. Prior to 1979, numerous instruments were developed to measure sportspersonship, most often related to doctoral research studies. Many were not widely used tools, and the psychometrics of the instruments were often lacking. However, the four instruments that have received

widespread application are discussed here in the chronological order in which they were developed. These tools include the Defining Issues Test (DIT); the Hahm Beller Values Choice Inventory (HBVCI); the Rudd-Stoll-Beller-Hahm Value Judgment Inventory (RSBH); and the Multidimensional Sportspersonship Orientation Scale and the Extended Version of the MSOS (MSOS/EMSOS).

Defining Issues Test (DIT; 1979)

The Defining Issues Test (DIT) was developed by James Rest in 1979 as a measure of moral judgment development. Greatly influenced by Kohlberg's (1976) six-stage theory of moral reasoning, Rest developed the DIT assessment tool to objectively measure how individuals understand and interpret moral issues. The results offer a profile of moral development (a P score) which indicates the extent to which respondents engage in reasoning at each of the six levels of Kohlberg's developmental sequence (Bredemeier & Shields, 1994). The stage profile provided by the DIT score, when compared to Kohlberg's stage-type score, more fully portrays the complexity of an individual's moral reasoning (Bredemeier & Shields, 1984b).

The DIT is not specific to a sports setting; instead, it is a measure of moral reasoning within a social context (Beller & Stoll, 1992). The pen and paper DIT differed from the earlier assessment of moral development tools used by Kohlberg which utilized semi-structured interview techniques (Mitchell, 2000). DIT participants were asked to read six moral dilemmas and rate the importance of issues related to deciding how to resolve the dilemma. The topics of the dilemmas were related to moral behavior and action, and attitudes toward public policy, political choices, and societal participation.

Subsequent research generally found the DIT to be a “psychometrically sound measure of moral judgment development that is hierarchical and mostly upward” (Mitchell, 2000, p. 4). The DIT was later subject to slight revisions (resulting in the DIT2) in order to replace outdated language and improve the face validity of the instrument (Rest, Narvaez, Thoma, & Bebeau, 1999). One example of a scenario used for the DIT2 includes:

The small village in northern India has experienced shortages of food before, but this year’s famine is worse than ever. Some families are even trying to feed themselves by making soup from tree bark. Mustaq Singh’s family is near starvation. He has heard that a rich man in his village has supplies of food stored away and is hoarding food while its price goes higher so that he can sell the food later at a huge profit. Mustaq is desperate and thinks about stealing some food from the rich man’s warehouse. The small amount of food that he needs for his family probably wouldn’t even be missed (Rest & Narvaez, 1998, p. 1).

In addition to the DIT, Rest (1984) also created a four-component model of moral action that highlighted the significance of motivation in moral action. The four processes identified by Rest (1984) included “interpret[ing] the situation and possible action (Process I), form[ing] a moral judgment about what should be done (Process II), choos[ing] a value (moral or nonmoral) to seek through action (Process III), and carry[ing] out the intended act (Process IV)” (Bredemeier & Shields, 1994, p. 177).

While the DIT scenarios are not specific to sport settings, the test has been utilized to measure moral development of participants in a few sportsmanship intervention studies (Beller & Stoll, 1992; Wandzilak et al., 1988) as well as moral reasoning – moral action studies (Bredemeier & Shields, 1984b, 1994; Proios & Doganis, 2006). Several studies have also used Rest’s (1984) four-component model specific to sport in the development and use of instruments for research in assessing moral functioning (Gibbons et al., 1995; Kavussanu & Roberts, 2001; Stuart & Ebbeck, 1995).

Hahm-Beller Values Choice Inventory (HBVCI; 1989)

The Hahm-Beller Values Choice Inventory (HBVCI; Hahm, Beller, & Stoll, 1989) was developed as a tool to evaluate moral reasoning in the sport setting. The tool measures how participants reason in the sport context with regard to honesty, responsibility, and justice. The scores on the instrument do not reflect moral action, but rather cognitive moral knowledge.

The HBVCI authors contended that the “moral knowing”, while not a predictor of moral action, is a precursor to moral action. According to Lickona (1991), moral knowing is the earliest cognitive phase of learning about moral issues and how to resolve them. He identified moral knowing as one of three concepts to foster development and maturation of moral character. The other two concepts are moral valuing and moral acting.

The HBVCI is theoretically based in ethical theory, specifically using deontic theory as its theoretical guide (Center for Ethics, 1998b). “Deontic, sometimes called nonconsequentialists, maintain either that consequences do not count at all in deciding what is morally right, or that rightness is a function of many considerations” (Center for

Ethics, 1998b, theoretical information Q3). Deontics identify universal codes of conduct that can be generalized. The HBVCI is based specifically on three of these universal codes: honesty, responsibility, and justice.

The HBVCI has been used extensively to assess individuals from the ninth grade through adult populations. At the collegiate levels, longitudinal studies have included students at the United States Military Academy and the Air Force Academy (Center for Ethics, 1998b). The tool has demonstrated high reliability and validity, with Cronbach alphas from .74 to .88 (Hahm, 1989). During the development stages, the DIT was used as a measure of concurrent validity, resulting in a correlation of .82, with scores on the HBVCI reflecting similar scores with the DIT's "P" values (Hahm, 1989).

The HBVCI instrument is a paper and pencil test consisting of twenty-one short sport scenarios. Participants evaluate each situation based on a five-point Likert Scale from strongly agree to strongly disagree. The inventory includes questions about how an individual reasons morally about issues in sport such as retaliation, drug use, personal responsibilities for actions, fairness to teammates and competitors, and fouling intentionally. "Higher scores reflect a more consistent use of moral principles that can be universally applied" (Beller & Stoll, 1995, p. 355). One example of a scenario used for the HBVCI includes:

During a volleyball game, player A hits the ball over the net. The ball barely grazed off player B's fingers and landed out of bounds. However the referee did not see player B touch the ball. Because the referee is responsible for calling rule violations, player B is not obligated to report the violation (Beller, 1990, p. 267).

Although the HBVCI tests moral reasoning in the sport setting, it differs from the MSOS. The MSOS defines and measures sportspersonship tendencies, while the HBVCI assesses moral reasoning specific to the conduct codes of honesty, responsibility, and justice. As a valid and reliable tool, the HBVCI has been used to evaluate over 80,000 individuals, including intercollegiate athletes (Center for Ethics, 1998b).

The Beller and Stoll study (1992), the only known study of the effects of a moral reasoning intervention program on intercollegiate student-athletes, utilized both the HBVCI and the DIT instruments. Other studies that used the HBVCI include Beller (1990), Beller and Stoll (1995), and Janzen (2006). Results from studies using the HBVCI have found that athletes have lower moral reasoning than non-athletes, female athletes' scores are higher than males but are steadily decreasing, and the longer athletes participate in sport, the more negatively affected is one's moral reasoning (Center for Ethics, n.d.) .

Rudd-Stoll-Beller-Hahn Value Judgment Inventory (RSBH; 1998)

The Rudd-Stoll-Beller-Hahn Value Judgment Inventory (RSBH; Rudd, 1998) was developed to measure two distinct types of moral character in an attempt to explain disparate viewpoints about the role of sport in character development. Rudd (2004) designed this tool to measure both moral character and social character, each of which are present in sport. While moral character may encompass values such as honesty, fairness, and responsibility, social character may include values such as teamwork, loyalty, self-sacrifice, work ethic, and perseverance.

The moral character index was constructed from 10 gamesmanship scenarios chosen directly from the HBVCI, selected on the basis of high internal reliability. Higher scores reflect disagreement with gamesmanship practices and more support of moral character in sport. The social character index contained 10 sport context scenarios that were embedded with social values of teamwork, loyalty, and self-sacrifice. Higher scores reflect agreement with social character scenarios and more support of social character in sport. Reliability and validity of the RSBHV has been assessed through five pilot studies, with the social character index Cronbach Alpha of .72 and the moral character index Cronbach Alpha of .88. A Factor analysis in the last two pilot studies indicated two separate constructs and indices (Rudd, 1989).

The RSBHV instrument is a paper and pencil test consisting of twenty short scenarios, ten for each character index. Participants evaluate each situation based on a five-point Likert scale, from strongly agree to strongly disagree. As stated previously, the moral character scenarios were derived directly from the HBVCI, with a sample scenario previously discussed. An example of a scenario from the social character index includes:

A college baseball game is tied in the bottom of the ninth inning, bases loaded with two outs. Just before Marvin comes to bat, his coach pulls Marvin aside. The coach commands Marvin to crowd the plate in hopes of being hit by a pitch. This would allow Team A to win the game. Although Marvin is concerned about being injured, Marvin should risk injury in order to help his team win (Center for Ethics, 1998a, sample questions section).

This RSBHV tool was utilized in the Rudd and Stoll (2004) study where college athletes were compared to college non-athletes in order to understand the effects of sport participation on moral and social character. Findings showed that team sport athletes' social character index scores were higher than their moral index scores. In addition, non-athletes scored significantly higher than team sport athletes on the moral character index but team sport athletes scored significantly higher than non-athletes on social character index. It was suggested that these results may relate to the sport socialization process where winning takes precedence over the moral ideal, in addition to the sport team ideology that emphasizes loyalty to team and work ethic (Rudd & Stoll, 2004).

Multidimensional Sportpersonship Orientation Scale (MSOS; 1997)/Extended Version of the MSOS (EMSOS; 2002)

As previously discussed, the MSOS was the tool developed by Vallerand et al. (1997) on the basis of the five dimensions established in defining sportpersonship. Those dimensions included (1) respect for rules and officials, (2) respect for opponents, (3) respect for social conventions, (4) respect for one's full commitment toward sport participation, and (5) a negative approach toward sportsmanship (e.g. being a poor loser). The MSOS is a pen and paper test that consists of a total of 25 statements, five for each of the five subscales listed above. Participants indicate how closely the statement corresponds to their own behavior, based on a five-point scale. The validation of the tool with middle-school Quebec athletes was an extensive process which is fully outlined later in this literature review.

Since its development, the use of the MSOS for research studies has been broad and widespread. It has been used (1) to investigate such aspects as the relationship between perceived motivational climate and sportspersonship (Miller, Roberts, & Ommundsen, 2004; Ommundsen, Roberts, Lemyre, & Treasure, 2003), (2) to study how sex and level of competitiveness relate to sportspersonship (Proios et al., 2006), and (3) to examine the role of predictor variables like achievement goals and participation motive on sportspersonship (Ryska, 2003). Consistent with the population for which this instrument was normed, these studies included adolescent age athletes as participants. The MSOS was also translated into several languages (French, Norwegian, Spanish) and used with international populations.

Most of the studies utilized the tool intact with all five subscales included. However, because of low internal consistency scores, one dimension, the “negative approach” subscale was not incorporated by some researchers (Miller et al., 2004). There had also been some criticism that the MSOS conceptualization of sportspersonship had a positive bias, with four positive and only one negative dimension. Shields and Bredemeier (1995) maintained that this conceptualization failed to include the “winning at all costs” perspective, one that is prominent in athletics. A new dimension, labeled “instrumental aggression”, was added to the MSOS recently to include this antisocial behavior and negative sportspersonship aspect (Stornes & Bru, 2002).

The expanded tool, The Extended Version of the Multidimensional Sportspersonship Scale (EMSOS) demonstrated improved psychometric properties over the MSOS by “strengthening the capacity of the scale to capture negative dimensions of

sportspersonship” (Stornes & Bru, 2002, p. 10). The EMSOS is a pen and paper test that consists of a total of 30 statements, five for each of the six subscales. The EMSOS was used first by Stornes and Bru (2002) and later by Stornes and Ommundsen (2004), with both studies sampling young male Norwegian handball players. This current study utilized the six-dimension EMSOS, which can be found in Appendix A.

Instrument Validity and Reliability

Psychometrics Overview

Social science research often attempts to measure intangible constructs such as attitudes, behaviors, emotions, or personalities. As a result, social scientists commonly design surveys, interviews, and other assessments in order to measure such concepts. These tools or instruments can be quite valuable measures of constructs, but only if there is confidence with what the test actually measures and how well it does so. To be beneficial, a test must accurately measure a given trait and do so with consistency. Both aspects are critical, as one without the other is quite ineffectual (Galvan, 2006; Ruane, 2005; Wright & Stone, 1999).

Validity and reliability are the common terms used to designate test accuracy and consistency. In assessing the effective relevance and usefulness of the EMSOS with college athletes, it is critical to assess both the validity and reliability aspects of the tool, and this was the basis for the current study. An additional element addressed in this section pertains to response bias aspects related to non-response and social desirability. While the literature encompassing these topics can be quite extensive, this section

provides just a brief overview of the essential elements which are relevant to the substantiation of the EMSOS.

Validity

Validity is a general term denoting “correctness of measure” (Yaremko, Harari, Harrison, & Lynn, 1982, p. 245). To be a valid instrument, the survey questions must measure the identified dimension or construct of interest (Czaja & Blair, 2005; Dunn, 1999; Ruane, 2005). Validity is determined not by a single statistic, but by a body of research that demonstrates the relationship between the test and the attitude or behavior it is intended to measure.

Most literature identified several different kinds of validity based on scope, relevance, predictive quality, and association. These various types of validity are termed content validity, construct validity, criterion-related validity, and face validity (Czaja & Blair, 2005; Dunn, 1999; Galvan, 2006; Muijs, 2004; Ruane, 2005; Wright & Stone, 1999). Of these, content, criterion, and construct validity are the concepts most relevant to this current study.

Content validity examines how representative the test is relative to the attitude intended to be measured. It is the extent to which the test items fully cover the content area of the construct to be measured (Yaremko et al., 1982). Ruane (2005) reminds us that content validity is an especially important consideration when working with complex, multidimensional concepts. If this is the case, multiple items or scales must be used to document the concept. Content validity is essentially a subjective evaluation of the criterion used to define a domain (Lanyon & Goodstein, 1982). The process often

involves judgment and relevance rating of the contents of the instrument by experts in the field (Galvan, 2006).

Criterion validity applies to how closely the tool relates to other measures where, theoretically, one might expect a relationship (Muijs, 2004). Concurrent validity is the type of criterion validity that is most relevant to this current study. Concurrent validity assesses whether scores on the instrument agree with, or concur with scores on other factors that one would expect to be relevant (Muijs, 2004). The important factor in evaluating concurrent validity is establishing the theoretically based variables that should be considered. For instance, in the case of sportspersonship, prior studies have indicated a known relationship exists relative to participant sex, type of sport, length of involvement in the sport, and level of competitiveness (Allison, 1982; Bredemeier, Shields et al., 1986; Proios & Doganis, 2006; Proios et al., 2006; Shields & Bredemeier, 1995). Results from a tool that measures sportspersonship tendencies should therefore show similar relationships to those factors, through a statistical technique called correlation coefficient (Muijs, 2004).

Construct validity is defined as the “extent to which scores are consistent with theoretical expectations” (Yaremko et al., 1982, p. 40). According to Dunn (1999), construct validity reflects how closely a researcher’s operational definition of a variable corresponds with the theoretical meaning of the variable. Construct validity often involves identifying a network of relationships among the measure in question and other relevant concepts (Lanyon & Goodstein, 1982). One of the ways to assess construct validity is through factor analysis, a statistical technique that examines the

interrelationships among variables (Stapleton, 1997). Confirmatory factor analysis identifies the number of factors present after considering which variables are correlated. The “goodness of fit” is then determined by matching the observed with the theoretical factor structures (Stapleton, 1997).

Reliability

Reliability “refers to the repeatability or dependability of measurement” (Lanyon & Goodstein, 1982, p. 140). The two most common types of reliability are temporal stability or consistency of results over time (Muijs, 2004), and internal consistency, “the degree to which individual items in a test, or groups of items...correlate with each other or with the total score on the test” (Yaremko et al., 1982, p. 113). Of these two types of reliability, internal consistency is most relevant to this current study.

The Cronbach alpha computation is one of the most widely used methods of examining internal consistency (Galvan, 2006). This analysis is computed for similar items within the test in addition to the overall measure, considering the degree to which all of the items measure the same construct (Cronk, 2006). Cronbach alpha scores range from 0.00 to 1.00, with values at or above .75 generally considered to indicate adequate internal consistency reliability when one scale is involved (Galvan, 2006) or .6 or higher when five or more subscales are involved.

Response Bias

Bias refers to the tendency of a measurement to be consistently higher or lower than the true population value (Czaja & Blair, 2005). Research methodology must consider protocol to control for bias in any research study in order to avoid distorted

findings. While there are many aspects that may be considered relative to the response bias, the two most relevant to this current study are social desirability bias and non-response bias.

Social desirability is “an item characteristic that produces a response set (bias) based on the subject’s perception of what response is socially desirable” (Yaremko et al., 1982, p. 222). In other words, a respondent may answer in a manner that portrays themselves in a more favorable light or reflects what they think the researcher wants to hear (Ruane, 2005). Among other factors, inquiries that pertain to sensitive issues have the potential to elicit socially desirable responses (Czaja & Blair, 2005). Strategies such as confidentiality and anonymity for respondents may assist in minimizing this bias.

Non-response bias presents yet another challenge to a study’s validity. The research design may contribute to this bias, or it may result from participant refusal to respond. If respondents have a choice whether or not to participate, it is possible that the responses from those opting out would differ from those that agree to take part. Again, there are strategies that may be implemented to improve response rate. However, if the response rate is low, non-responder follow-up may be indicated in order to compare non-responder results with those of respondents and evaluate any significant differences relative to key variables. Another strategy may include creating a model of responses on key questions to test worst case scenario responses by non-responders, to ascertain the extent to which results would be altered.

Prior validation of the MSOS/EMSOS

This section outlines the extensive process documented for the development of and validation of the MSOS. Prior to developing the MSOS instrument, Vallerand et al. (1996) conducted research to derive a definition of sportspersonship. The researchers initially surveyed French-Canadian athletes ($N=1,056$) from 10-18 years of age and from seven different sports (track and field, hockey, gymnastics, volleyball, badminton, swimming, and basketball). The methodology included a stratified random sampling of teams in order to ensure that approximately the same number of male and female athletes participated in the study, that each sport was equally represented, and that the participants were representative of athletes from the Province of Quebec for the identified sports and age groups.

The subjects were asked to identify sport situations and behaviors that were relevant to sportspersonship. A factor analysis of the responses resulted in the identification of five dimensions. These dimensions included concern and respect for the rules and officials, social conventions, the opponent, one's full commitment to one's sport, and the relative absence of a negative approach toward sport participation (Vallerand et al., 1996). This formed the basis for their multidimensional definition of sportspersonship referenced earlier.

Vallerand and his colleagues built on the results of the 1996 study in the development of a tool to measure athletes' orientations on the five sportspersonship dimensions (Vallerand, Briere et al., 1997). The construction of this tool, the MSOS, took several steps. The first step included the vetting of potential items (items $N = 100$)

for inclusion by two sport psychology researchers in order to assess content validity. Next, a pilot study was conducted where 15 amateur athletes (ages 12-16) completed a refined (items $N=65$) version of the MSOS. Ambiguous items were reformulated and 132 athletes completed the preliminary version of the scale (items $N = 65$). The researchers examined the items in terms of how well they measured each of the dimensions. Using this factor analysis, they identified the best five items of each subscale, resulting in the 25-item version of the MSOS (Vallerand, Briere et al., 1997).

Examples of subscale items include shaking hands with opponents (respect for social conventions); obeying the rules (respect for the rules and officials); going all out during practices (respect for one's full commitment toward sport participation); helping an opponent up after a fall (respect and concern for the opponent); and making excuses for a bad performance (negative approach toward sport). All items were rated on a five-point scale ranging from "doesn't correspond to me at all" to "corresponds to me exactly" (Vallerand, Briere et al., 1997).

After the initial development of the scale was completed, the 25-item version of the MSOS was administered to 362 athletes (age $M = 14.4$ years). In this study, the scale was validated by comparison to participant responses to five hypothetical sportpersonship scenarios which were aligned with the sportpersonship dimensions specific to the five subscales (Vallerand, Briere et al., 1997). The hypothetical scenarios were developed with the assistance of two sport psychologists unrelated to the MSOS research.

Data on the MSOS was subjected to a confirmatory factor analysis (CFA) that compared the proposed five-factor model with a saturated (perfect fit) model. Results indicated the five-factor model provided an acceptable fit for the data (Vallerand, Briere et al., 1997). In general, the factor loadings were high to moderate, and all were significant (t statistics > 3.17 , $p < .05$) (Vallerand, Briere et al., 1997). “Overall, this five-factor model confirms the factorial structure of the MSOS and provides further support for the multidimensional definition of sportpersonship which underlies the MSOS” (Vallerand, Briere et al., 1997, p. 200).

In addition, the researchers tested the reliability of the measure. As stated previously, reliability reflects the internal consistency of the responses within each subscale. Adequate reliability is demonstrated with a minimum acceptable level of a Cronbach alpha score of .6 or higher when five or more subscales are used to measure different dimensions of a construct. Internal consistency scores (Cronbach alpha's) were computed for each of the five sportpersonship subscales with the following results: .73 for ‘commitment toward sport’; .74 for ‘respect for the social conventions’; .67 for ‘respect and concern for the opponent’; and .72 for ‘respect for rules and officials’ (Miller et al., 2004; Vallerand, Briere et al., 1997). However, the “negative approach” subscale had a Cronbach alpha of only .54 (Vallerand, Briere et al., 1997). Thus, only the first four subscales showed adequate reliability.

Construct validity of the MSOS was further supported since the five MSOS subscales were found to be correlated. This step was done to assess the level of association among the five subscales. Results indicated positive and moderate correlation

values among the subscales, except for those involving the “negative approach” subscale with the “commitment” and the “rules and officials” subscales, which were negative (Vallerand, Briere et al., 1997).

Pearson correlations were also computed between MSOS subscales and the behavior intentions of the hypothetical scenarios. Results showed that “within each of the hypothetical scenarios, the MSOS subscale relevant to the scenario was more strongly related to behavioral intentions than the other subscales” (Vallerand, Briere et al., 1997, p.202). However, the correlation involving the “negative approach” and its relevant scenario was only .16, and the correlation involving the “rules and officials” subscale yielded correlations slightly higher in the “commitment” and “social conventions” scenarios than in its relevant scenario (Vallerand, Briere et al., 1997). Nonetheless, in general, the sportspersonship orientations related significantly to the behavior intentions in the hypothetical scenarios (Vallerand, Briere et al., 1997), further supporting the validity of the MSOS.

Temporal stability of the MSOS was also tested, with 53 athletes (age $M=14.82$ years) completing the MSOS twice within a five-week period. Temporal stability assesses the consistency of participant responses over time. Test-retest correlations ranged from .56 to .76, with a mean correlation of .67 (Vallerand, Briere et al., 1997). The authors posited that the moderate correlation scores reflect some participant responsiveness to the influence of contextual social factors, and stated that overall the pattern of results provide support for the reliability of the MSOS (Vallerand, Briere et al., 1997).

In spite of these findings, the validity of the MSOS was highly criticized for psychometric problems in a 1999 quantitative survey study by McCutcheon (1999). McCutcheon's population included older Southeastern U.S. competitive team sport athletes in two samplings with a median age of 28.7 (*SD* of 5.9 years) in the first, and median age of 30.9 (*SD* of 10 yrs) in the second. Sample one participants ($N=97$) completed the MSOS and the Marlow-Crowne Social Desirability Scale (MCSD; Crowne & Marlowe, 1960). The MCSD measures social desirability independent of psychopathology (Crowne & Marlowe, 1960). Sample two participants ($N=63$) completed the MSOS and the 1982 version of Right Wing Authoritarianism Scale (RWA; Altemeyer, 1988), which measured participants' orientation toward acceptance of established authority and law (Christie, 1991).

The four criticisms proposed by the author include: the MSOS is tainted by social desirability; two groups nominated for high and low sportspersonship scored nearly the same on the MSOS; the commitment to athletics excellence dimension is irrelevant to sportspersonship evidenced by the arousal-cost-reward model (Piliavin, Dovidio, Gaertner, & Clark, 1981); and the authors allowed personal values to interfere with test scoring (McCutcheon, 1999). Good sportspersons, as indicated by the MSOS, tended to score high on the authoritarianism scale (McCutcheon, 1999).

However McCutcheon's study (1999) is not without criticism itself. The author used "trained" graduate and undergraduate students enrolled in a measurements class to engage in snowball sampling and to subjectively determine and label subjects as "good" or "bad" sports. Regarding the difference in scores between those labeled "good" and

“bad” sports, a $p > .05$ was found, an acceptable statistical significance level that the author rejects. A relatively small number of subjects was studied ($N=160$), and they differed from the Vallerand et al. (1997) study with regard to age (older versus younger) and culture (U.S. versus French-Canadian).

Despite the criticism levied by McCutcheon (1999), it appears that the MSOS demonstrates adequate levels of reliability and validity, with limitations. First, it should be noted that the MSOS was validated with a restricted segment of athletes (i.e. young French-Canadian athletes from a limited number of sports). Next, the “negative approach” subscale yielded a low Cronbach alpha value (.54), indicating low internal consistency. Finally, while slight in the difference, the “rules and officials” subscale was not found to correlate more strongly with its related hypothetical scenario. Vallerand et al. (1997) themselves advocated for further testing of the instrument and replication of the research among different populations.

As mentioned earlier, the MSOS was expanded to include a sixth dimension of instrumental aggression through the work of Stornes and Bru (2002). The MSOS had been criticized for having a positive bias since the conceptualization includes four positive dimensions and one negative dimension (Shields & Bredemeier, 1995). The EMSOS added an additional negative dimension (instrumental aggression) which takes into consideration aggressive acts towards opponents with the intention of gaining some personal advantage (Stornes & Bru, 2002). According to Stornes and Bru (2002), the inclusion of instrumental aggression in the EMSOS improved the psychometric

properties of the instrument. This current study sought to test and replicate prior research using the EMSOS to measure the sportspersonship tendencies of U.S. collegiate athletes.

Complexities and Paradox of Sport

This literature review section would be incomplete without some discourse about the complexities that relate to the study of sportspersonship. These complexities are apparent largely because of issues related to the objectivity of evaluating moral and ethical behavior. In addition, the constitutive rules of sport do not govern all situations, and sporting behavior expectations often “go beyond conformity to the formal rules of sport” (Simon, 2004, p. 47). Indeed, some ethical questions are not easily resolved by formal or structural features alone.

According to Simon (2004), one widely cited reason for doubting the objectivity of ethics is relativism. Descriptive relativism is the term used to rationalize the moral judgments or values held by individuals as relative to their respective culture, socioeconomic state, or ethnic and religious backgrounds. If descriptive relativism is true, no ethical judgment is more justifiable than another. On the other hand, descriptive relativism may not imply skepticism, but rather an ethical or value relativism view that each culture’s code is right for that culture (Simon, 2004). If ethical relativism is true, morally justifiable actions are defined by the group to which one belongs. Specific to sports, the team culture itself may (correctly or incorrectly) provide the basis for the moral code of behaviors of team members.

Another area of ambiguity for sportspersonship behaviors can arise when views are based on moral reasoning, both weak and strong. Simon (2004) advocates that the

moral evaluation of actual practices in sport must be subject to standards rather than merely emotive reactions. In examining a moral view, the three essential criteria include impartial, consistent, and reflective critical judgments (Rawls, 1971; Simon, 2004). The moral correctness of sporting behaviors is sometimes vague, and often controversial. Applying the three standards identified allow for examination of the moral issues surrounding sportspersonship in an objective manner.

One would expect the formal rules that govern sports to provide substantial guidance for standards of behaviors. Yet the constitutive rules of the sport and the penalties for noncompliance often create instances of inconsistencies and interpretations. Expectations of good sporting behavior are often not outlined in the rules and are subject to conventions of the game (Simon, 2004). In evaluating the role of formal rules in setting expectations for ethical behavior, Simon (2004) states:

...if sports are understood simply as rule-governed activities, and fair play is thought of simply as conformity to the rules, any deviation from the rules may be considered unethical. But if common social understandings and conventions accepted in practice by participants are ethically relevant, a more permissive account of ethically acceptable behavior in sport may emerge (Simon, 2004, p. 45).

With the analysis of some of the complexities of sportspersonship, Simon (2004) thoroughly considered the case of the “strategic foul”, which he defined as an “intentional violation of the rules to get a technical advantage” (p. 42). A widely known example of this is when the losing team in basketball intentionally fouls in order to stop the clock late

in the game. According to Simon (2004), this is a convention in basketball that allows such fouls as legitimate. In spite of the formal rules that prohibit fouls, this convention is accepted by all, known to occur by all, creates no special advantage over the other team, and is therefore not commonly viewed as cheating. Conventions such as these - behaviors that are impermissible by the formal rules but are acceptable in certain circumstances - are part of the “ethos” of the game (D'Agostino, 1988; Simon, 2004).

However, beyond the recognition that conventional behavior, while accepted, may not be morally right, there are other issues with the implicit acceptance of strategic fouls as legitimate. While the end-of-game basketball fouling example may be easily understood and accepted by all, other examples are less clear. Consider for example, an intentional (strategic) foul to stop a likely goal, such as an easy lay-up in basketball or a breakaway situation in soccer. According to Fraleigh (1988), while such acts are often called *good* fouls because they are in the prudent self-interest of the athlete and his or her team, they detract from the contest because they are not necessarily agreed upon by all participants. So-called conventions or ethos of a particular sport may therefore be vague and not fully understood or accepted by all in the same way, creating ambiguity and questions about legitimacy (Fraleigh, 1988; Pearson, 1988; Simon, 2004).

To further complicate the issue, the penalties for violation of sport rules may be viewed by participants as either a sanction or an option. Simon (2004) argues that in the case of the end-of-game fouling in basketball, the penalty is best regarded as a price rather than a punishment, as long as the foul shots awarded to the offended team are viewed by all as fair compensation for the violation. Increasing the severity of the penalty

beyond fair compensation would likely change the function to more of a sanction than an option (Simon, 2004). Until or unless that occurs, the *good* foul is likely to be an accepted but undesirable part of many sports contests (Fraleigh, 1988). Interestingly, although not discussed by either Simon or Fraleigh, there *are* stricter consequences when the referee deems a foul to be committed intentionally in basketball. However, especially in the case of end-of-game fouling in basketball, this is rarely called by the officials, perhaps indicating that they too accept it as a convention of the game.

Leaman (1988) suggested that cheating is taken into consideration by the rules of the sport and is built into the audience and player perceptions of the game. He stated that “[i]t may be morally acceptable to do certain things in sport which are not acceptable in ordinary life” (p. 281). In discussing the sport of hockey for instance,

the implicit objective is to put the opposing star player out of action without doing him serious harm. Illegal tactics and “tricks” of the game are both encouraged and taught; rough play and physically aggressive performances are strongly encouraged and sometimes players are taught the techniques of fighting. Minimal consideration is given to the formal normative rules of the game, and the conceptions of sportsmanship and fair play are forgotten...(Vaz as cited by Leaman, 1988, p. 281).

Recall also that Bredemeier and Shields (1984a) used the phrase “bracketed morality” in their research which demonstrated that ethical sport dilemmas would elicit lower levels of moral reasoning than ethical dilemmas presented within the everyday life contexts.

Through use of these examples, it is evident that complexities about sporting behavior routinely develop surrounding the formal rules and conventions of the game. Conventions are not all equally understood, and the ethics of strategic fouling are complex. It is not always clear if a penalty for violating the rule is a price/option or a sanction/penalty (Simon, 2004). Physically aggressive play may be taught and expected by spectators and players alike, regardless of the rules set forth for the game (Leaman, 1988). All of these beliefs or perceptions contribute to the paradox created with athletics competition and sportspersonship. Volkwein (1995) confirmed this paradox of sport, citing the expectation for athletes to “overcome the opponent by any means that are legal or appear to be legal and to act fairly and morally sound at the same time” (p. 316).

Recall that Keating (2001) stated that sportsmanship requires participants to conduct themselves in a manner that increases pleasure in the activity for both themselves and their opponents. Keating also distinguished between recreational activity and the more serious and competitive athletics activity. Accordingly, he believed that athletics requires participants to engage in fair play, to compete and win with honor. But Keating acknowledged the paradox created when “locked in a deadly serious and emotionally charged situation” (p. 147), the athlete is also expected to increase the pleasure of the opponent.

According to Simon (2004), competition in the context of sport is “most defensible ethically when understood as a mutual quest for excellence in the intelligent and directed use of athletic skill in the face of challenge” (p. 38). Perhaps this is the standard to which actual play can and should be evaluated. Russell (1998) appeared to

agree when he stated “rules should be interpreted in such a manner that the excellences embodied in achieving the illusory goal of the game are not undermined but are maintained and fostered” (p. 15). Complexities and paradoxes may exist, but upholding these standards may provide the necessary guidance when evaluating good sporting behaviors.

Summary of Literature Review

A study of the literature related to sporting behavior confirmed the need to substantiate a tool for measurement of sportpersonship tendencies for the U.S. collegiate population. This literature review has included scholarly writings and research related to sportpersonship definitions, moral development theories, instruments used, differentiating factors related to sportpersonship, and the process of assessing validity and reliability. In addition, research related to the prior validation of the MSOS and EMSOS for the adolescent population was highlighted and the complexities and paradox of sportpersonship was considered.

Amidst the varying definitions used for sportpersonship, the multidimensional definition developed by Vallerand et al. (1996) serves as the basis for this current study. This definition includes five factors: (1) full commitment; (2) social conventions; (3) rules and officials; (4) opponent dimension; and (5) negative approach (Vallerand et al., 1996). A sixth dimension, that of “instrumental aggression”, is also included based on the work of Stornes and Bru (2002). This addition has the potential to add value since it has socio-moral implications and provides an opportunity to evaluate a more complete instrument. The EMSOS tool is based on the six-dimension definition outlined above.

The theoretical basis for the EMSOS includes a social-psychological focus, which embraces several objectives related to the definition of sportspersonship, the role of social determinants, and the motivational style of the participant (Vallerand & Losier, 1994). Both Lickona (1991) and Vallerand and Losier (1994) distinguished between moral knowing, moral valuing and moral acting. Vallerand and Losier (1994) advocated for an integrated approach to the study of sportspersonship because of the influences of teammates, opponents, parents, and coaches. The social-psychological approach also includes social determinants as a major factor in predicting sportspersonship behaviors, factors such as cultural expectations, structural features, interpersonal influences, or situational aspects.

The variables of gender, level of physical contact, competitiveness, and emphasis on winning have all been demonstrated to have some level of relevancy to the sporting behavior of the participants. In general, prior studies indicated that males versus females, contact versus non-contact sports, team versus individual sports, and highly competitive versus recreational, all demonstrated lower levels of good sportspersonship behaviors over the other. Clearly, “[t]he influence that sport has for its participants depends on a complex set of factors tied to the specific sport and the social interactions that are present” (Shields & Bredemeier, 1995).

Attempts to quantify sportspersonship are filled with complexity, largely because of issues related to the objectivity of evaluating moral and ethical behavior. In addition, the constitutive rules of sport do not govern all situations and the conventions or ethos of sports often allow for rule violations (Simon, 2004). Some ethical questions are not easily

resolved by formal or structural features alone and are subject to the nuances of interpretation by participants and fans.

Historically, there have been numerous attempts to develop tools to measure sporting behavior (Haskins, 1959; McMahan, 1978). Although these instruments are countless, four predominant tools have emerged as those most broadly used in research studies. These include the Defining Issues Test (DIT); the Hahm Beller Values Choice Inventory (HBVCI); the Rudd-Stoll-Beller-Hahm Value Judgment Inventory (RSBH); and the Multidimensional Sportspersonship Orientation Scale and the Extended Version of the MSOS (MSOS/EMSOS). These instruments vary in specificity of scope and focus. The EMSOS was selected for this current study because it is most directly related to the measurement of sportspersonship versus moral reasoning.

Prior research has indicated adequate reliability and validity for the MSOS for use with the adolescent population (Vallerand, Briere et al., 1997). The tests included a confirmatory factor analysis which demonstrated the model provided an acceptable fit for the data. In addition, Cronbach alpha coefficients indicated adequate internal consistency. Construct validity of the MSOS was further supported with the five MSOS subscales found to be correlated. Pearson correlations also indicated positive relationships with MSOS subscales and the behavior intentions of the hypothetical scenarios as well. Finally, temporal stability indicated moderate correlation of scores over time.

There was, however, criticism directed at the “negative approach” subscale of the MSOS, which demonstrated only .54 Cronbach alpha. As a result, there were studies that eliminated that particular subscale in their research (Miller et al., 2004). There has also

been criticism that the MSOS conceptualization of sportspersonship has a positive bias, with four positive and only one negative dimension. Because of this, a new dimension, labeled “instrumental aggression”, was added to the MSOS, to create the EMSOS (Stornes & Bru, 2002). Once again, in order to test the most complete tool, the six-dimension EMSOS was selected for use with this current study.

This study links to the fundamental research and extends it to investigate the validity of the EMSOS for use with a different population. With successful validation of the instrument with the collegiate population, this current study provides endorsement for use of the EMSOS in measure and further study of unsporting behaviors at the college and university level.

CHAPTER 3: METHODOLOGY

This section outlines the methods used to examine the primary research question. As stated earlier, this question asks if the Extended Version of the Multidimensional Sportpersonship Orientation Scale is a valid and reliable measure of sportpersonship tendencies of U.S. collegiate athletes. As outlined previously, the secondary research questions that were investigated include:

- Q1: What are the responses to the survey questions relative to the demographic characteristics? [descriptive statistics]
- Q2: Do results from this sample yield a pattern of factors similar to the factor analysis results of previous research studies? [construct validity]
- Q3: Does the internal consistency of the instrument match that of previous research attempts? [reliability]
- Q4: To what extent do the EMSOS subscale results correlate with the corresponding hypothetical scenario results? [construct validity]
- Q5: Do the instrument scores agree with trends from previous research studies as they relate to demographic variables (sex, sport, class year, age, level of competitiveness, or number of years involved in competitive sports)? [concurrent validity]
- Q6 [If less than a 75% return rate]: Is there a significant difference in results generated by respondents versus a model which includes “worst-case scenario” scores for non-respondents? [non-respondent bias]

Also in this section the criteria used for selection of the institution for the case study as well as the instrumentation is outlined. In addition, the data collection procedures and data analysis process is included.

Research Design

This was a survey research case study involving a Catholic residential liberal arts college in New England¹. The survey instrument used is the Extended Version of the Multidimensional Sportpersonship Orientation Scale (EMSOS; Appendix A) and a hypothetical scenario questionnaire (Appendix B), which was administered to the subjects for data collection. The study assessed the validity and reliability of the EMSOS with a select U.S. collegiate population.

Population

The population of participants included the student-athletes at the selected college who were members of an intercollegiate sport team in the 2008-2009 academic year. The total number of athletes in this population was 352. Fifty-three percent of this total population was female and 47% was male. There were a total of 21 varsity programs, 11 for women and 10 for men. Team and individual sports as well as contact and non-contact sports were included in the sport program offerings. The age of participants was predominately 18-21 years old, with a range of 18-25 years old.

The selected college was a selective, Catholic, private, residential, liberal arts institution with an enrollment of approximately 2,000 full-time undergraduate students. The student body was comprised of predominately White, middle-upper class students

¹ Though all citations are known, they are not listed in order to maintain the anonymity of the institution at which this study occurred.

from New England states. Sixty percent of the students self-identified as Catholic. The selected college was an NCAA Division II institution that awarded athletics scholarships only in the sport of men's and women's basketball (10 scholarships for each team).

This institution was selected for this study because the population of student-athletes offered a broad representation in terms of gender, type of sport (contact versus non-contact, individual versus team), number of sports, number of athletes, and level of competitiveness. Prior research has indicated that Christian college environments do not appear to modify patterns of moral reasoning of athletes (Beller, Stoll, Burkwell, & Cole, 1995). In addition, Stoll and Beller (1995) found no significant differences in moral reasoning between Division I and Division III athletes. These findings suggest that the Division II student-athletes at this selected college may provide a suitable, if not ideal population to study.

Instrumentation

The Extended Version of the Multidimensional Sportspersonship Orientation Scale (Stornes & Bru, 2002; Vallerand, Briere et al., 1997) was used to assess tendencies towards good sporting behaviors. Permission was received from the original author for use of this instrument for this study (R.J. Vallerand, personal communication, February 11, 2008). The extended survey consisted of 30 questions. Subjects were instructed to read each statement and respond based on a five-point scale ranging from "doesn't correspond to me at all" to "corresponds to me exactly".

In addition, hypothetical scenarios corresponding to each of the six subscales were developed by the researcher. A balance of male/female protagonists as well as

individual/team sport examples were used in constructing the scenarios. The hypothetical scenarios were vetted by an expert panel of three individuals unrelated to the MSOS research (see Appendix C). The instrument used to survey the subjects included these six hypothetical scenarios in addition to the 30 EMSOS statements. The inclusion of this aspect mirrors the methodology used in the research that validated the original MSOS tool for younger athletes (Vallerand, Briere et al., 1997).

Subjects were instructed to read each of the six scenarios and to respond to the concluding statement based on the same five-point scale used for the 30 question EMSOS. For ease of administration, both the EMSOS and the hypothetical scenario sections were combined together on the same survey. Additionally, demographic information was collected on sex, sport, age, class year, number of years involved in competitive sports, and athletics scholarship status.

Data Collection Procedures

Approval from both the University of Vermont Institutional Review Board (IRB) and the selected college Institutional Review Board was obtained prior to commencing the research (Appendix D). Student participants were recruited at the conclusion of existing athletics sport team meetings, in a designated meeting room on campus, in the Fall of 2008. The EMSOS was administered by a research assistant as a pencil and paper survey to all consenting student-athletes. Prior to administration, the Information Sheet (Appendix E) was reviewed with all participants and they were given the opportunity to decide whether or not to participate in the study. As was deemed necessary by the

selected college IRB, only those students 18 years of age or older were permitted to participate. Consent was implied for all subjects that chose to complete the survey.

Since the principal investigator was the athletics director at the college, she did not directly administer the questionnaire. This step was included in order to remove potential issues related to position of power or coercion. The research assistant for this study was a third party, not affiliated with the athletics program. Valid certificates of completion of the University tutorial on research related to human subjects were on file for the principal investigator, the research assistant, and the faculty advisor prior to commencing the data collection. The survey results were anonymous and did not contain identifiable information that would link any individual to their survey responses.

The coach and research assistant were provided with a script to read to the athletes (Appendix F) which explained to the athletes that this study was a voluntary survey on sporting behaviors. In order to encourage participation, the principal investigator offered a challenge incentive, a \$500 charity donation if 75% of the student-athletes completed the surveys. The coach briefly presented the opportunity to the team members, introduced the research assistant, and then left the room. The research assistant reviewed the information sheet and provided introductory information about the study.

The participants were assured of the anonymity and confidentiality of their responses and their ability to terminate participation at any time and for any reason without repercussion. It was also made clear during the consent process that refusal to participate would not affect status on the athletics team. Those athletes who chose to participate were encouraged to answer the survey with full honesty and to ask questions

at any time. The research assistant left the room while the participants completed the surveys and placed them in a secure box. The surveys were picked up by the research assistant when the last participant left the room. The surveys were stored in a locked file cabinet in a locked closet in the athletics department office.

Data analysis

Respondent scores on each question were recorded relevant to each subscale. In order to be consistent with prior research (Vallerand & Losier, 1994), a global sportpersonship index was also calculated. This involved averaging scores on each of the six EMSOS subscales and adding the means (after reverse coding the negative approach toward participation and instrumental aggression subscales). Higher scores on the index reflected stronger attitudes of concern and respect for rules and officials, opponents, social conventions, less instrumental aggression, and a stronger commitment and more positive attitude towards sport participation.

Nominal data was provided for the demographic variables of sex, type of sport, physical nature of sport, and athletics scholarship status. An ordinal grouping variable was created for number of years of involvement in competitive sports which coded the groups as “8 or less years”, “9-11 years”, “12-14 years”, and “15 or more years”. Ordinal data was also provided for class year and age.

All collected data was analyzed using the Statistical Package for Social Sciences (SPSS). The analysis specifically related to the research question regarding the validity and reliability of the EMSOS instrument among the collegiate population studied. The process of validating the instrument involved several computations that assessed

construct validity, concurrent validity, and internal reliability. The comparison chart below outlines the data analysis that was conducted. Because there was a return rate of over 75%, Question 6 was not considered further as a research question.

Table 1: Data Analysis Processes to Assess Validity and Reliability of the EMSOS

Data Analysis Processes to Assess Validity and Reliability of the EMSOS			
Statistical Analysis	Assessment	Research questions considered	Analysis Target
Descriptive Statistics	Frequency distributions	Q1: What are the responses to the survey questions relative to the demographic characteristics?	EMSOS-30
Principal Component Analysis	Construct validity	Q2: Do results of this sample yield a pattern of factors similar to the results of previous research studies?	EMSOS-30
Cronbach Alpha	Reliability - Internal consistency	Q3: Does the internal consistency of the instrument match that of previous research attempts?	Each subscale, and the EMSOS-30
Pearson Correlation	Construct validity	Q4: To what extent do the EMOS subscale results correlate with the corresponding hypothetical scenario results?	Each subscale and the corresponding hypothetical scenario
Independent Sample t-tests & ANOVA	Concurrent Validity	Q5: Do the scores agree with trends from previous research studies, as they relate to demographic variables (sex, sport, age, class year, scholarship status)?	EMSOS Global Sportspersonship Index

As indicated by the preceding chart, descriptive statistics were first generated for the survey results. Next, principal component analysis was used to assess the construct validity of the EMSOS. Reliability was assessed by examining internal reliability, generated through Cronbach alpha coefficients for all subscales and the entire EMSOS-30 test. Pearson correlations were computed between EMSOS subscales and the behavior intentions of the hypothetical scenarios, providing another aspect of construct validity.

Through use of independent sample t-tests, the EMSOS global sportspersonship index was examined to determine agreement with trends from previous research studies with regard to the demographic variables of sex, type sport, physical nature of and scholarship status. Because they were represented by ordinal variables, comparison for the other demographic variables (age, class year, and length of involvement in competitive sports) required a one-way Analysis of Variance (ANOVA). When a statistically significant difference was found, Tukey HSD (Honestly Significant Difference) post-hoc tests were conducted in order to determine the nature of the difference between experience groupings.

CHAPTER 4: RESULTS

Results of the data collection and analysis are presented in this chapter. Each research question is addressed sequentially, and the results are outlined. First, descriptive statistics for the survey respondents are provided. Next, the reliability and validity analysis is presented through the use of a confirmatory factor analysis, Cronbach alpha, Pearson correlation, independent sample t-tests, and Analysis of Variance (ANOVA). Finally, the chapter concludes with the results generated when one of the subscales is omitted from the analysis.

Research Question 1: Descriptive Statistics

A total of 305 out of the population of 352 student-athletes completed the survey, for a return rate of 86.6%. This was an exceptional response rate, yielding a large sample size. Non-respondents included those student-athletes who were not present at the meeting, those who were younger than 18 years of age, those who chose not to complete the survey, and those who submitted incomplete surveys.

Responses included representation from all 21 varsity sports. Women's sports teams included basketball, cross country, field hockey, ice hockey, lacrosse, skiing, softball, swimming and diving, soccer, tennis, and volleyball. Men's sports teams included baseball, basketball, cross country, golf, ice hockey, lacrosse, skiing, soccer, swimming and diving, and tennis.

The first research question asked: what are the responses to the survey questions relative to the demographic characteristics? Respondents' ages ranged from 18-25 years,

with an average age of 19.62 years. The average number of years respondents were involved in competitive sports was 11.03 years. The complete demographic data is presented in Table 2.

Table 2: Demographic Data

SEX				
	Frequency	Percent	Valid Percent	Cumulative Percent
Male	157	51.5	51.5	51.5
Female	148	48.5	48.5	100.0
Total	305	100.0	100.0	

CLASS YR				
	Frequency	Percent	Valid Percent	Cumulative Percent
First Year	107	35.1	35.1	35.1
Sophomore	69	22.6	22.6	57.7
Junior	61	20.0	20.0	77.7
Senior	68	22.3	22.3	100.0
Total	305	100.0	100.0	

PHYSICAL NATURE OF SPORT				
	Frequency	Percent	Valid Percent	Cumulative Percent
Non contact	218	71.5	71.5	71.5
Contact	87	28.5	28.5	100.0
Total	305	100.0	100.0	

TYPE SPORT

	Frequency	Percent	Valid Percent	Cumulative Percent
Individual Sport	95	31.1	31.1	31.1
Team Sport	210	68.9	68.9	100.0
Total	305	100.0	100.0	

Years Involved in Competitive Sports

	Frequency	Percent	Valid Percent	Cumulative Percent
8 yr or less	73	23.9	23.9	23.9
9-11 years	87	28.5	28.5	52.5
12-14 years	68	22.3	22.3	74.8
15 or more years	77	25.2	25.2	100.0
Total	305	100.0	100.0	

SCHOLARSHIP STATUS

	Frequency	Percent	Valid Percent	Cumulative Percent
Non-scholarship	285	93.4	93.4	93.4
Scholarship	20	6.6	6.6	100.0
Total	305	100.0	100.0	

AGE GROUP				
Yrs Old	Frequency	Percent	Valid Percent	Cumulative Percent
18 yrs	83	27.2	27.2	27.2
19 yrs	78	25.6	25.6	52.8
20 yrs	57	18.7	18.7	71.5
21 yrs	54	17.7	17.7	89.2
22 yrs or older	33	10.8	10.8	100.0
Total	305	100.0	100.0	

Research Question 2: Construct Validity – Principal Component Analysis

The second research question considered: do results from this sample yield a pattern of factors similar to the factor analysis results of previous research studies? The Null Hypothesis (H_0) stated: there is no difference in the pattern of factors yielded from this study when compared with the pattern of factors yielded from the previous research. The results indicated that there was a difference in the pattern of factors identified in this study, with five factors identified in the original study (Vallerand, Briere et al., 1997), and three predominant factors identified in this current study.

Table 3 identifies the component matrix for the principal component analysis. Eight components are evident with Eigen values greater than 1.0, which cumulatively accounted for 59.7% of the variance. When examining which questions load for each factor at the $\pm .5$ threshold, the variance appeared to drop off after factor 3. Only one question loaded at the threshold for factors 5, 6, and 7, and no questions loaded at the

threshold for factors 4 and 8. Three of the items were complex and loaded on two factors at the same time.

There was some clustering of factor loadings specific to subscales. Factor one was primarily loaded by the questions in subscale 1 (social conventions) and subscale 2 (respect for rules and officials). Factor two was negatively loaded by questions in subscale 6 (instrumental aggression). Factor three was primarily loaded by questions in subscale 4 (respect for opponent). This suggests that the EMSOS was represented predominately by 3 factors (social convention & respect for rules/officials, instrumental aggression, and respect for opponents). These findings are different from the prior research which confirmed 5 factors in the 5 subscale MSOS instrument (Vallerand, Briere et al., 1997).

Table 3: Principal Component Analysis

		Component Matrix							
Questions & Subscales		1	2	3	4	5	6	7	8
Q1	S1	.567	.142	-.125	-.199	.368	.289	-.138	-.018
Q2	S2	.620	-.054	.021	-.111	-.223	-.225	.126	.176
Q3	S3	.175	.458	.266	.221	-.024	.163	-.098	.391
Q4	S4	.536	.027	-.406	.069	.009	.142	.106	-.012
Q5	S5	-.093	-.199	.161	.241	.622	-.241	.028	.301
Q6	S6	.172	-.556	.063	.118	.292	.041	.229	.392
Q7	S1	.289	.508	-.015	-.282	.187	.218	-.013	.360
Q8	S2	.682	-.055	.160	-.103	-.232	-.047	-.065	.082
Q9	S3	.260	.355	.352	.339	-.094	.051	-.339	.244
Q10	S4	.410	-.020	-.609	.325	-.095	.089	-.163	.019
Q11	S5	.099	-.077	.352	.323	.166	-.333	-.018	-.213
Q12	S6	.152	-.640	.210	.110	-.107	.087	.079	.089
Q13	S1	.675	.148	-.007	-.288	.268	.202	-.162	-.188
Q14	S2	.726	-.166	.090	-.104	-.208	-.130	-.109	-.147
Q15	S3	.527	.388	.277	.215	-.272	.054	.116	-.028
Q16	S4	.366	.160	-.542	.412	-.001	.110	.042	-.064
Q17	S5	.106	.065	.422	.397	.190	-.094	-.473	-.197
Q18	S6	.567	-.509	.205	-.073	-.135	.054	-.064	.021
Q19	S1	.615	.215	-.131	-.204	.387	.008	-.002	-.261
Q20	S2	.651	-.041	-.033	-.062	.032	-.413	-.059	-.088
Q21	S3	.237	.306	.218	.271	.112	.079	.602	-.191
Q22	S4	.368	-.119	-.579	.394	-.125	.066	-.056	.062
Q23	S5	.225	.177	.417	.242	.133	.106	.193	-.252
Q24	S6	.472	-.489	.124	.014	.029	.128	.101	.081
Q25	S1	.412	.304	.023	-.304	.076	-.157	.150	.104
Q26	S2	.561	.102	-.054	-.153	-.019	-.547	-.088	.152
Q27	S3	.367	.471	.288	.090	-.223	.009	.242	.089
Q28	S4	.304	-.051	-.418	.278	.194	-.216	.113	.026
Q29	S5	.309	-.318	.291	.031	.024	.425	-.155	-.025
Q30	S6	.576	-.519	.195	-.046	-.023	.154	.093	-.081

Research Question 3: Reliability - Cronbach alpha

The third research question considered: does the internal consistency of the instrument match that of previous research attempts? The Null Hypothesis (H_0) stated: there is no difference in the measures of internal consistency yielded from this study when compared with the measures yielded from the previous research. The results indicate similar reliability results were produced in this current study when comparing it to the previous studies (Stornes & Bru, 2002; Vallerand, Briere et al., 1997).

Five of the six subscales demonstrated acceptable reliability of greater than .600 Cronbach alpha. The “negative approach” subscale indicated poor reliability with a low Cronbach alpha of .371. The reliability of the entire EMSOS was quite high with a Cronbach alpha of .821. Table 4 identifies each of the Cronbach alpha scores for the subscales found in this current study as well as those found in previous research.

These results compare favorably with the initial research results determined by Vallerand et al. (1997) which reported the following Cronbach alphas: .74 for “respect for the social conventions”; .72 for “respect for rules and officials”; .73 for “commitment toward sport”; .67 for “respect and concern for the opponent”: and .54 for the “negative approach” subscale. Stornes and Bru (2002) added the “instrumental aggression” subscale and determined that Cronbach alpha to be .85. Subsequent research findings were also consistent in finding satisfactory reliability for all subscales except for the “negative approach” (Lemyre, Roberts, & Ommundsen, 2002).

Table 4: Subscale and Test Reliability

Sub-Scale and Test Reliability			
Subscales	Cronbach Alpha	# items	Previous Research Cronbach Alpha
Social conventions	.694	5	.74
Respect for rules/officials	.792	5	.72
Full commitment	.687	5	.73
Respect for opponent	.754	5	.67
Negative Approach	.371	5	.54
Instrumental Aggression	.772	5	.85
Entire EMSOS	.821	30	N/A

With the “negative approach” subscale low for both this study and the original research (Vallerand, Briere et al., 1997), removing it from the tool was considered. Further analysis revealed that the Cronbach alpha for the EMSOS with the “negative approach” subscale questions deleted was .799. Item–total statistics indicate no single question elimination would drastically change the Cronbach alpha for the entire test. Table 5 indicates the results of the Cronbach alpha if any item was deleted. As noted, the overall Cronbach alpha with any question deleted would range from .806 to .832. Removal of question 5 (part of the “negative approach” subscale) results in raising the overall Cronbach alpha to .832. Further discussion about items that are specific to the “negative approach” scale can be found in Chapter 5.

Table 5: Cronbach's Alpha if Item Deleted

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Q1	101.65	170.534	.468	.440	.811
Q2	101.51	170.946	.509	.436	.810
Q3	101.24	180.731	.126	.282	.821
Q4	102.74	166.016	.443	.400	.811
Q5	102.92	182.954	-.027	.228	.832
Q6	104.05	176.673	.228	.341	.819
Q7	101.41	177.978	.166	.393	.821
Q8	101.23	171.458	.575	.490	.810
Q9	101.33	179.161	.214	.331	.819
Q10	103.68	171.927	.345	.490	.815
Q11	101.76	179.361	.116	.146	.823
Q12	103.62	175.681	.161	.417	.824
Q13	101.70	168.106	.544	.605	.808
Q14	101.55	168.454	.610	.577	.807
Q15	101.10	176.544	.425	.476	.815
Q16	102.83	171.946	.299	.412	.817
Q17	101.69	180.097	.126	.243	.822
Q18	102.45	162.705	.513	.571	.807
Q19	101.81	169.316	.496	.532	.810
Q20	102.57	163.928	.554	.482	.806
Q21	101.09	179.615	.201	.240	.819
Q22	103.68	173.132	.328	.471	.816
Q23	101.31	178.703	.190	.214	.820
Q24	102.61	164.145	.447	.394	.811
Q25	101.18	176.025	.300	.305	.817
Q26	102.03	168.400	.443	.440	.811
Q27	101.64	176.709	.258	.375	.818
Q28	103.11	170.731	.269	.245	.820
Q29	103.37	174.333	.280	.270	.817
Q30	102.56	161.963	.533	.589	.806

Research Question 4: Construct validity – Pearson Correlation

The fourth research question examined: to what extent do the EMSOS subscale results correlate with the corresponding hypothetical scenario results? The Null Hypothesis (H_0) stated: there is no statistically significant correlation with the EMSOS subscale scores and the corresponding hypothetical scenario scores. The results demonstrated statistically significant moderate correlation of most of the subscales to the scenarios.

The results indicate that all scenarios correlated best to their corresponding subscale, with the exception of Subscale 2 (rules and officials), which corresponds slightly better to the scenario related to instrumental aggression rather than that of rules and officials. All correlations were moderate except the “negative approach” subscale, which was a weak correlation. The “instrumental aggression” subscale demonstrated the highest correlation to the corresponding scenario with a .560 Pearson correlation. All correlations of the subscales to the corresponding scenarios were statistically significant ($p < .001$). Table 6 identifies the Pearson correlation for the all subscales and scenarios. The results provided information about the construct validity of EMSOS and suggested a moderate level of agreement with the EMSOS test items and the scenarios designed to measure the same construct.

Table 6: Correlation of EMSOS subscales to hypothetical scenarios

		Subscale 1 Social Convention	Subscale 2 Rules and Officials	Subscale 3 Commitment	Subscale 4 Opponents	Subscale 5 Negative Approach	Subscale 6 Aggression
Scenario 1 Social Convention	Pearson Correlation	.412**	.313**	.247**	.224**	.171**	.242**
	Sig. (2-tailed)	.000	.000	.000	.000	.003	.000
	N	305	305	305	305	305	305
Scenario 2 Rules/ Officials	Pearson Correlation	.179**	.373**	.149**	.275**	.071	.194**
	Sig. (2-tailed)	.002	.000	.009	.000	.215	.001
	N	305	305	305	305	305	305
Scenario 3 Commitment	Pearson Correlation	.111	.152**	.378**	.009	.216**	.102
	Sig. (2-tailed)	.053	.008	.000	.877	.000	.075
	N	305	305	305	305	305	305
Scenario 4 Opponents	Pearson Correlation	.211**	.214**	-.006	.327**	.048	.196**
	Sig. (2-tailed)	.000	.000	.914	.000	.409	.001
	N	304	304	304	304	304	304
Scenario 5 Negative Approach	Pearson Correlation	.136*	.169**	.146*	-.035	.237**	.243**
	Sig. (2-tailed)	.017	.003	.010	.546	.000	.000
	N	305	305	305	305	305	305
Scenario 6 Aggression	Pearson Correlation	.098	.400**	.080	.184**	.213**	.560**
	Sig. (2-tailed)	.088	.000	.162	.001	.000	.000
	N	305	305	305	305	305	305

Research Question 5: Concurrent Validity – Independent Sample t-tests

The fifth question examined: do the instrument scores agree with trends from previous research studies as they relate to demographic variables (sex, type of sport, physicality of sport, class year, age, level of competitiveness, or number of years involved in competitive sports)? The Null Hypothesis (H_0) stated: there is no statistically significant difference between groups of intercollegiate student-athletes formed by the demographic variables of sex, type sport, physicality of sport, class year, age, athletics scholarship, or number of years involved in competitive sports (or not), with respect to higher sportspersonship tendencies, as measured by the EMSOS global sportspersonship index. The results indicated a statistically significant difference in the global sportspersonship index for the variables of sex, type sport, physicality of sport and number of years involved in competitive sports. Results do not indicate a statistically significant difference for the variables of class year, age, and athletics scholarship.

Sex: Using the t-test for independent samples, equal variances assumed, there was a statistically significant difference in the global sportspersonship index for men and women ($t = -4.239$, $df = 303$, $p < .001$). The mean global sportspersonship index score for men was significantly lower ($m = 20.517$, $sd = 2.82$), than the mean score for women ($m = 21.842$, $sd = 2.62$). Table 7 identifies the results of the independent t-test based on the variable of sex.

Table 7: Sex - Independent Sample t-test

Group Statistics							
Sex			N	Mean	Std. Deviation	Std. Error Mean	
Global	Male		157	20.517	2.8221	.2252	
Sportspersonship index	Female		148	21.842	2.6241	.2157	

Sex		t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
						Lower	Upper
Global	Equal	-4.239	303	.000	-1.3247	-1.9397	-.7097
Sportspersonship index	variances assumed						

Contact/non-contact sports: Using the t-test for independent samples, equal variances not assumed, there was a statistically significant difference in the global sportspersonship index for contact sport athletes and non-contact sport athletes ($t = 2.803$, $df = 214.497$, $p < .01$). The mean global sportspersonship index score for contact sport athletes was significantly lower ($m = 20.54$, $sd = 2.19$) than the mean score of the non-contact sport athletes ($m = 21.407$, $sd = 2.98$). Table 8 identifies the results of the independent t-test based on the variable of the physical nature of the sport.

Table 8: Contact/non-contact sports - Independent sample t-test

Group Statistics							
Contact/ Non-Contact		N	Mean	Std. Deviation	Std. Error Mean		
Global	Non	218	21.407	2.9831	.2020		
Sportspersonship	Contact						
index	Contact	87	20.540	2.1850	.2343		

Contact/Non-Contact		t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
						Lower	Upper
Global	Equal	2.803	214.497	.006	.8671	.2574	1.4769
Sportspersonship	variances not						
index	assumed						

Team/individual sports: Using the t-test for independent samples, equal variances assumed, there was a statistically significant difference in the global sportspersonship index for team-sport athletes and individual-sport athletes ($t = 4.455$, $df = 303$, $p < .001$). The mean global sportspersonship index score for team-sport athletes was significantly lower ($m = 20.69$, $sd = 2.75$) than the mean score for individual-sport athletes ($m = 22.192$, $sd = 2.66$). Table 9 identifies the results of the independent t-test based on the variable of the type of sport.

Table 9: Team/individual sports - Independent sample t-test

Group Statistics					
Team/Individual Sports		N	Mean	Std. Deviation	Std. Error Mean
Global	Individual	95	22.192	2.6639	.2733
Sportspersonship	Team	210	20.693	2.7447	.1894
index					

Team/Individual Sports		t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
						Lower	Upper
Global Sportspersonship index	Equal variances assumed	4.455	303	.000	1.4982	.8365	2.16

Years of involvement in competitive sports: A one-way ANOVA was calculated comparing the global sportspersonship index of athletes based on their years of involvement in competitive sports. There was a statistically significant difference found based on number of years of involvement ($F(3,301) = 11.322, p < .001$). Post hoc information was gathered by Tukey HSD to analyze the nature of the difference between experience groupings. The analysis indicated that the global sportspersonship index scores from the group of “8 or less years” experience, the group of “9-11 years” of experience, and the group of “12-14 years” of experience were all significantly greater than that of the group of “15 or more years” of experience. There was no statistically significant mean global sportspersonship index score difference among the other groups. The score comparisons are for “8 or less years” involvement ($m = 21.96, sd = 2.42$), “9 through 11” years involvement ($m = 21.35, sd = 2.7$), “12 through 14” years involvement ($m = 21.73, sd = 2.46$, and “15 or more years” involvement ($m = 19.675, sd = 3.01$). Table 10 identifies the ANOVA results of the comparison by years of involvement in competitive sports.

Table 10: Years of involvement in competitive sports – ANOVA

YRS OF INVOLVEMENT IN SPORTS

Tests of Between-Subjects Effects

Dependent Variable: Global Sportspersonship score

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	242.191 ^a	3	80.730	11.322	.000	.101
Intercept	135727.322	1	135727.322	19035.818	.000	.984
YRSINSPORT	242.191	3	80.730	11.322	.000	.101
Error	2146.161	301	7.130			
Total	138950.760	305				
Corrected Total	2388.352	304				

a. R Squared = .101 (Adjusted R Squared = .092)

YRS OF INVOLVEMENT IN SPORTS

Multiple Comparisons

Global Sportspersonship Index

Tukey HSD

(I) Years Involved in Sports	(J) Years Involved in Sports	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
8 yr or less	9-11 years	.608	.4238	.479	-.487	1.703
	12-14 years	.229	.4500	.957	-.933	1.392
	15 or more years	2.286*	.4362	.000	1.159	3.413
9-11 years	8 yr or less	-.608	.4238	.479	-1.703	.487
	12-14 years	-.378	.4322	.818	-1.495	.738
	15 or more years	1.679*	.4178	.000	.599	2.758
12-14 years	8 yr or less	-.229	.4500	.957	-1.392	.933
	9-11 years	.378	.4322	.818	-.738	1.495
	15 or more years	2.057*	.4444	.000	.909	3.205
15 or more years	8 yr or less	-2.286*	.4362	.000	-3.413	-1.159
	9-11 years	-1.679*	.4178	.000	-2.758	-.599
	12-14 years	-2.057*	.4444	.000	-3.205	-.909

These results suggest that male versus female athletes, contact versus non-contact sport athletes, team versus individual-sport athletes, and those athletes involved in competitive sports for 15 or more years, are more likely to have a more negative sportspersonship orientation. Results do not indicate a statistically significant difference for the variables of class year, age, and athletics scholarship.

Other Results

The primary results indicated less than desirable reliability and validity of the “negative approach” subscale. Further analysis conducted with this subscale removed from the EMSOS provided interesting secondary results. As stated earlier, removing the subscale decreased the Cronbach alpha of the overall EMSOS from .821 (30 items) to .799 (25 items). Recall that the Cronbach alpha of the “negative approach” subscale was a weak .371. This may indicate that while the items within the subscale have weak reliability among themselves, they do appear to improve overall reliability of the EMSOS.

Removing the “negative approach subscale” appears to improve the overall construct validity of the EMSOS. The Pearson correlation of .237 between that subscale and its corresponding scenario was the weakest of all six subscales. In addition, the principle component analysis of factors with the “negative approach” subscale resulted in lowering the number of factors with Eigen values greater than one from eight in the original analysis to six in the analysis with the subscale excluded. This more closely coincided with previous research.

Interestingly, the results of the independent t-tests and one way ANOVA's with the "negative approach" subscale removed provided very similar findings to those when it was included. That is, when the subscale was omitted, a statistically significant difference was found for the variables of sex, type of sport, physical nature of sport, and number of years involved in competitive sport. In addition, when the subscale was omitted, a significant difference was not found for the variables of scholarship status, age, or class year. The following results occurred when the "negative approach" subscale was removed.

With the subscale removed, using the t-test for independent samples, equal variances assumed, there was a statistically significant difference in the global sportpersonship index for men and women ($t = -3.905$, $df = 303$, $p < .001$). Using the t-test for independent samples, equal variances assumed, there was a statistically significant difference in the global sportpersonship index for team sport athletes and individual sport athletes ($t = 4.634$, $df = 303$, $p < .001$). Using the t-test for independent samples, equal variances not assumed, there was a statistically significant difference in the global sportpersonship index for contact sport athletes and non-contact sport athletes ($t = 2.825$, $df = 220.752$, $p < .01$). There was also a statistically significant difference found based on number of years of involvement ($F(3, 301) = 9.997$, $p < .001$). The Tukey HSD post hoc analysis indicated that the global sportpersonship index scores from each group with fewer years of involvement in competitive sports were all significantly greater than that of the group of "15 or more years" of experience.

With the subscale removed, no statistically significant difference was found in the global sportspersonship index for scholarship and non-scholarship athletes, age, and class year. Tables 11 and 12 are a compilation of the findings with the “negative approach” subscale removed.

Table 11: Negative Approach Subscale Omitted: Independent sample t-test – Sex, Type Sport, Physical Nature of Sport.

Global Sportspersonship Index	t	df	Sig. (2-tailed)	Mean Difference	Mean	Std. Deviation	95% Confidence Interval of the Difference	
							Lower	Upper
Sex	-3.905	303	.000	-1.166			-1.556	.1433
Male					17.10	2.74		
Female					18.27	2.46		
Type Sport	4.634	303	.000	1.479			.8509	2.107
Individual					18.69	2.52		
Team					17.21	2.61		
Physical Nature	2.825	220.8	.005	.8218			.2482	1.396
Non-contact					17.90	2.85		
Contact					17.08	2.03		

Table 12: Negative Approach Subscale Omitted: One-Way ANOVA – Years Involved in Competitive Sports

ANOVA Global Sportspersonship Index					
# Yrs Involvement	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	195.834	3	65.278	9.997	.000
Within Groups	1965.505	301	6.530		
Total	2161.338	304			

Multiple Comparisons- Tukey HSD – Yrs Involved in Sports

(I) Yrs Involved	(J) Yrs Involved	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
8 yrs or less	9-11 years	.47766	.40560	.641	-.5702	1.5255
	12-14 years	.11326	.43067	.994	-.9994	1.2259
	15 or more yrs.	2.01245*	.41744	.000	.9340	3.0909
9-11 years	8 yrs or less	-.47766	.40560	.641	-1.5255	.5702
	12-14 years	-.36440	.41362	.815	-1.4330	.7042
	15 or more yrs	1.53480*	.39983	.001	.5019	2.5677
12-14 years	8 yrs or less	-.11326	.43067	.994	-1.2259	.9994
	9-11 years	.36440	.41362	.815	-.7042	1.4330
	15 or more yrs	1.89920*	.42524	.000	.8006	2.9978
15 or more years	8 yrs or less	-2.01245*	.41744	.000	-3.0909	-.9340
	9-11 years	-1.53480*	.39983	.001	-2.5677	-.5019
	12-14 years	-1.89920*	.42524	.000	-2.9978	-.8006

Summary

Results of the EMSOS within this case study of U.S. collegiate athletes indicate that the EMSOS demonstrated acceptable validity and reliability among most subscales and as an overall instrument. The exception includes one subscale, that of the “negative approach”. Recall that this subscale refers to the extent to which an athlete reacts negatively to his or her sport participation. The “negative approach” subscale had

unacceptable reliability and very weak correlation to the corresponding subscale, indicating weak construct validity. In addition, it appears that the addition of the sixth subscale (instrumental aggression) to the original version of the tool (the MSOS), improved the psychometrics of the instrument. Sportspersonship factors that emerged from the principal component analysis included “social convention & respect for rules/officials”, “instrumental aggression”, and “respect for opponents”.

Relationships between demographic variables and the global sportspersonship index were examined both with the EMSOS intact as well as with the “negative approach” subscale removed. These results, both with and without the “negative approach” subscale, demonstrated a statistically significant difference in the index for some variables, and suggest that male athletes, contact sport athletes, team-sport athletes, and athletes with 15 or more years of involvement in competitive sports are more likely to have a negative sportspersonship orientation. These results also suggest that class year, age, and scholarship status do not necessarily result in different sportspersonship orientations.

CHAPTER 5: DISCUSSION

This chapter interprets the findings of each research question and draws some overall conclusions. In addition, limitations and implications of this present study are outlined as well as recommendations for further research.

Research Questions and Related Topics

Research Question 1: Descriptive Statistics

The first research question considered the demographic data of the survey respondents, and provided descriptive statistics for the study. The population for the original validation of the MSOS included a total of 1056 middle-school French-Canadian athletes from seven different sports (track and field, hockey, gymnastics, volleyball, badminton, swimming, and basketball) with a nearly equal gender distribution (Vallerand, Briere et al., 1997). This current study included survey responses from 305 U.S. collegiate athletes with a nearly equal gender distribution from 13 different sports. Of these 13 sports, nine were unique to the original study. Important demographic information was provided which relates to sex, type of sport, physical nature of sport, athletics scholarship status, class year, age, and the number of years of involvement in competitive sports.

Research Question 2: Construct Validity – Principal Component Analysis

The second research question examined the construct validity of the EMSOS and asked whether results from this sample yield a pattern of factors similar to the factor analysis results of previous research studies. The null hypothesis (H_0) stated: there is no

difference in the pattern of factors yielded from this study when compared with the pattern of factors yielded from the previous research. Based on the findings of this current study, this null hypothesis is rejected.

Recall that Vallerand et al. (1997) confirmed a five-factor model for the structure of the MSOS with those factors corresponding to the five subscales related to Vallerand's multidimensional definition of sportpersonship ("social convention", "respect for rules/officials", "full commitment", "respect for opponents", and "negative approach"). In this current study, eight factors were initially identified with Eigen values greater than one. However, the principal component analysis indicates that the loadings clearly dropped off after factor three. After closer examination of the clustering of questions loading into the factors, the factors that emerged include "social convention & respect for rules/officials", "instrumental aggression", and "respect for opponents". Note that the first factor listed is a combination of two factors from the original study.

There appears to be agreement on inclusion of three of the factors in the original research. In addition, largely because a new subscale was introduced into the expanded version of the MSOS, this new subscale named "instrumental aggression" emerged strongly as a factor in the analysis. Of interest, the factors of "full commitment" and "negative approach" are not represented in the factor results of this current study. Responses to questions regarding full commitment and negative approach did not contribute significantly to the variance. This may call into question their inclusion in the definition of sportpersonship, as well as their inclusion in the tool.

McCutcheon (1999), in her criticism of the MSOS, questioned the inclusion of commitment to athletic excellence as a dimension of sportpersonship. She argued that just because an athlete is committed to better performance does *not* necessarily mean they have a commitment to better sportpersonship. In fact, McCutcheon contended that if they did correlate, then it would follow that professional athletes and scholarship athletes would be better sportpersons than amateur athletes. Noting that “the most flagrant and frequent examples of poor sportpersonship occur at the highest levels of sport” (McCutcheon, 1999, p. 442), she challenged the “full commitment” inclusion in the MSOS.

The arousal-cost-reward model (Piliavin et al., 1981) also lends credence to McCutcheon’s argument. With the cost-reward theory, those that have the most to lose are least likely to disadvantage themselves in competition. This could include lending equipment or lending a hand to an opponent, both used as examples of good sporting behavior in the MSOS. Thus the “full commitment” factor may have a weak (if any) positive relationship to good sporting behavior.

The “negative approach” subscale emerged as problematic both in prior research as well as the current study. The negative approach toward sport participation includes the extent to which an athlete competes for awards, fails to accept responsibility for poor play, shows anger after mistakes, or criticizes a coach. In addition to this factor not loading sufficiently in the current study, it demonstrated poor reliability and a weak correlation to the corresponding hypothetical scenario as well. These items are discussed more thoroughly in relation to research questions three and four.

Central to the discussion of the difference in factors identified in this current study as they relate to prior research is the obvious difference of the population surveyed. The MSOS has been used extensively in prior research, but never with U.S. collegiate athletes. The adolescent age athletes from the U.S (Ryska, 2003), Canada (Vallerand, Briere et al., 1997), Norway (Miller et al., 2004; Ommundsen et al., 2003), and France (D'Arripe-Longueville, Pantaleon, & Smith, 2006) have been studied in the past using the MSOS. The older age group and those with a more advanced level of competition could perhaps be expected to align with slightly different sportspersonship factors than the younger athletes.

The results of the factor analysis may provide an argument for the exclusion of the “full commitment” and “negative approach” subscales from the tool to measure sportspersonship. However, further validity and reliability analysis is important and must be considered before arriving at that recommendation. The discussion of the other research questions may provide further insight into that question.

Research Question 3: Reliability - Cronbach alpha

The third research question considered the reliability of the instrument and whether the internal consistency of the instrument matches that of previous research attempts. The null hypothesis (H_0) stated: there is no difference in the measures of internal consistency yielded from this study when compared with the measures yielded from the previous research. Based on the findings of this current study, this null hypothesis failed to be rejected.

The Cronbach alpha reliability scores from this current study provide quite similar results to that of prior research (Lemyre et al., 2002; Stornes & Bru, 2002; Vallerand, Briere et al., 1997). All indicate acceptable internal consistency scores for the scales of “social conventions”, “respect for rules and officials”, “full commitment”, “respect for opponent”, and “instrumental aggression”, as well as the reliability score for the overall instrument. The “negative approach” subscale, however, in the original research (Vallerand, Briere et al., 1997), in the Lemyre et al. (2002) work, and in this current study, demonstrated less than desirable reliability with Cronbach alpha scores of .54, .39, and .37 respectively.

These reliability results indicate the questions specific to the “negative approach” subscale could be further considered for analysis. Those subscale questions are:

- 5. I compete for personal honors, trophies, and medals.
- 11. I criticize what the coach makes me do.
- 17. After a competition, I use excuses for a bad performance.
- 23. When my coach points out my mistakes after a competition, I refuse to admit that I made those mistakes.
- 29. If I make a mistake during a crucial time of the match, I get angry.

This subscale is reverse-scored for the sportspersonship global index score, and contains an eclectic mix of questions. Question number 5 relates to possessing an extrinsic motivation for participation. Question numbers 17, 23, and 29 relate to taking responsibility and/or controlling emotion regarding performance errors. Question number 11 relates to being respectful of the coach and taking direction. It’s no wonder, with the wide array of topics in this subscale that it suffers from inadequate reliability.

Several research studies have considered the relationship of participation goals and sportspersonship orientations (Duda, 1989; Walling & Duda, 1995). These studies have

generally found that positive prosocial attitudes towards sport would most likely be demonstrated by athletes whose primary reasons for participating are intrinsic. It would therefore follow that question 5 would relate negatively to good sporting behavior. Yet the analysis shows that this question has a very weak correlation to the global sportspersonship index, and its removal results in the most improvement to the overall reliability score of the instrument. This finding is difficult to explain in light of prior research. Perhaps this one question which relates to participation goals is not sufficient enough to capture the full scope of measuring the respondent's intrinsic or extrinsic value orientation.

Interestingly, there were actually several studies that removed the “negative approach” subscale when using the MSOS or EMSOS based on the low reliability scores of the subscale (D'Arripe-Longueville et al., 2006; Lemyre et al., 2002; Miller et al., 2004; Ryska, 2003). This current study included it in order to measure the psychometrics of all subscales. However, given the reliability results of this subscale, strong consideration should be given for *exclusion* of it in the overall instrument.

Research Question 4: Construct validity – Pearson Correlation

The forth question considered to what extent the EMSOS subscale results correlate with the corresponding hypothetical scenario results. The null hypothesis (H_0) stated: there is no statistically significant correlation with the EMSOS subscale scores and the corresponding hypothetical scenario scores. Based on the findings of this current study, this null hypothesis is rejected.

Recall that the hypothetical scenarios constructed for this current study involved the vetting of them by a panel of experts (see Appendix C) to confirm construct validity specific to the corresponding subscale. Pearson correlation results indicated that each subscale corresponds best to its relevant scenario (with the slight exception of the rules/officials subscale), and that those correlations were statistically significant. However, the “negative approach” scenario has the weakest correlation with a .237.

The methodology, which included scenarios in the instrument validation process, was consistent with that of the original MSOS research (Vallerand, Briere et al., 1997). The findings of the current study also yielded similar results to that of the original study regarding the highest correlations among the subscale and their related scenario. Also similar was the low correlation for the “negative approach” subscale and its relevant scenario, which was only .16 in the original study (Vallerand, Briere et al., 1997).

The construct validity of the subscales is supported by the statistically significant moderate correlation to most of the related scenarios. However, once again, it is the “negative approach” subscale that produced troublesome results. Combined with the findings from the principal component factor analysis and the Cronbach alpha reliability measure, this Pearson correlation data lends further support for consideration of the removal of the “negative approach” subscale from the instrument.

Research Question 5: Concurrent Validity – Independent Sample t-tests

The fifth question considered the concurrent validity of the instrument and whether the scores agree with trends from previous research studies as they relate to demographic variables (sex, sport, class year, age, level of competitiveness, or number of

years involved in competitive sports). The null Hypothesis (H_0) stated: there is no statistically significant difference between groups of intercollegiate student-athletes formed by the demographic variables of sex, sport, class year, age, athletics scholarship, or number of years involved in competitive sports (or not), with respect to higher sportspersonship tendencies, as measured by the EMSOS global sportspersonship index. Based on the findings of this current study, this null hypothesis is rejected for the variables of sex, type of sport, physical nature of sport, and number of years involved in competitive sport, and fails to be rejected for the variables of class year, age, and athletics scholarship status.

If the EMSOS is to be substantiated as a viable instrument, one would expect that the results of the tool would be consistent with the trends yielded from prior research. In fact, these findings are quite consistent with prior research as they relate to differences of sportspersonship tendencies and the demographic variables of sex, type of sport, and length of involvement in competitive sports. A statistically significant difference was found to indicate that female athletes, individual-sport athletes, non-contact sport athletes, and those athletes with fewer than 15 years of involvement in competitive sports, received higher global sportspersonship index scores than athletes that are male, team-sport, contact-sport, with 15 or more years of involvement. The findings showed no statistically significant relationship with the global sportspersonship index score and class year, age, or athletics scholarship status.

Consistent with prior research (Allison, 1982; Proios et al., 2006), this current study finding suggests that female athletes have higher sportspersonship tendencies than

male athletes. Allison (1982) attributes this to sport participants operating among different normative systems that vary by sex and are fluid and flexible. In addition, perhaps women's tendency to emphasize human connection and to judge themselves in terms of their ability to care (Gilligan, 1982) has some influence on sportpersonship orientation. Gilligan also contended that women's moral development is more centered on the understanding of responsibility and relationships, rather than the understanding of rights and rules. Recall as well that Goleman (2006) identified the extreme female brain as one that excels at empathizing. Given that sportpersonship includes respect as a primary component, it is not surprising that the findings suggest that females display good sporting behavior to a greater extent than males.

Based on prior research (Rudd & Stoll, 2004; Vallerand, Deshaies et al., 1997), team sport athletes have been found to have a lower sportpersonship orientation than that of individual sport athletes. Similarly, this current study found the same results. Shields et al. (1995) posited that the coach and team both play an important role in establishing a team moral standard, and that athletes often find it difficult to go against that standard, regardless of their individual beliefs. Similarly, Bredemeier, Shields et al. (1986) hypothesized that a high level of team cohesion would likely result in a shared common understanding and display of behaviors like cheating. In addition, the team sport socialization process may develop social character, as defined by teamwork, loyalty and self-sacrifice qualities, to the detriment of moral character development, as defined by honesty, fairness, and responsibility (Rudd & Stoll, 2004).

Consistent with prior research (Bredemeier & Shields, 1986a; Bredemeier, Shields et al., 1986), this current study findings also suggest that contact sport athletes tend to have a lower sportpersonship orientation than non-contact sport athletes. Bredemeier, Shields et al. (1986) found a positive correlation with participation in contact sports and a less mature moral reasoning as well as greater aggression tendencies. In addition, contact sports provide a context in which aggressive play is often rewarded (Bredemeier & Shields, 1986a). Since the operational definition of sportpersonship for this current study includes the aspect of instrumental aggression, it is logical that the assessment of sportpersonship tendencies is negatively impacted by the physical nature of a particular sport.

Those most experienced in sport were found in prior research to be more likely to display unsporting behaviors (Allison, 1982; Bredemeier, Shields et al., 1986). Similarly, this current study found that the grouping of athletes with 15 or more years of experience had lower mean global sportpersonship index scores than those with less competitive experience. This finding may be reflective of the increased emphasis on winning (Feezell, 1988; Papp & Pristoka, 1995) at higher levels of competition, or the sport team ideology (Rudd & Stoll, 2004; Vallerand, Deshaies et al., 1997), where athletes are increasingly socialized to put the team's interest ahead of all else. Of note is the fact that increased age and class year did not demonstrate that same relationship in the findings. This may suggest that it is not simply a matter of growing older that causes the poorer sportpersonship orientation and that indeed longer involvement in sports is the contributing factor.

It is somewhat of a surprise that scholarship status was not found to have a statistically significant difference in relation to the global sportspersonship index score in this current study. No known prior study specifically studied this scholarship status variable, but related variables (emphasis on winning and level of competition) have received much attention. Papp and Pristoka (1995) found a contradiction between success-orientation and sportspersonship. On the other hand, Proios et al. (2006) found that higher levels of competitiveness corresponded to higher sportspersonship attitudes except those towards opponents.

Based on prior research results, it might follow that those who have athletics scholarship and play at a highly competitive level would have a poorer sportspersonship orientation. However, this was not the case for this current study. While scores for scholarship athletes were slightly higher, no statistically significant difference in global sportspersonship index scores was found. This may well be attributed to the very small number of respondents who were scholarship athletes ($N=20$) compared to the sample population of 305 athletes. The results with the “negative approach” subscale removed showed that scholarship athletes also scored slightly higher on the sportspersonship index with an independent t-test that approached significance ($p = .056$). Still, the small number of subjects limits the implications that can be drawn regarding the scholarship status findings.

Complexities and Paradox

The survey questions and results create an opportunity for a discussion about the complexities and paradox of sportspersonship in athletics competition. Many of the

complexities outlined in the literature review section are relevant to the survey under consideration. Who gets to decide what is ethical? Is it always cheating when participants don't play by the rules? Does good sporting behavior require more than just following the formal rules of the game?

Many survey questions asked about respect for and compliance with the rules (Q 2, Q8, Q14, Q18). However, as discussed by many authors (D'Agostino, 1988; Fraleigh, 1988; Simon, 2004), sport is defined by much more than just the formal rules. The game includes conventions specific to the sport and applicable in certain situations. Usually these conventions are understood and agreed upon by all participants, but not always (Simon, 2004). Without a means for clarification, it is difficult to know how the survey respondents interpreted and answered the questions about strict rules compliance. Did some of the athletes take into consideration the ethos of the game? If so, they may have reported compliance as long as they played within the rules *and* conventions of the sport in which they participated.

There were also several survey questions that specifically dealt with aggressive tendencies (Q6, Q12, Q24, Q30). Once again, the ethos of certain sports may allow for or even encourage aggressive play (Leaman, 1988). On the surface, some would say playing aggressively is desirable, indicative of good effort and hustle. Sports often provide a context in which aggressive play is rewarded (Bredemeier & Shields, 1986a). Nonetheless, the sportpersonship index score of survey respondents would be lower if they acknowledged aggressive play. On the other hand, if playing aggressively leads to violence in the sport, it is certainly undesirable from any viewpoint.

The role and respect for the referee is also considered by several survey questions (Q2, Q20, Q26). Clearly the officials have a responsibility for enforcing the rules and participants are expected to accept their decisions without objection. However, are participants also responsible for not accepting “unearned benefits” from incorrect, even egregious errors, especially in the case of a misapplication of the rules (as opposed to a judgment call)? An occasional self-report of a rules violation by a participant might be viewed as virtuous, but the constant correction of the referee (even for the benefit of the opponent) could be viewed as disrespectful.

Finally, what is the sportpersonship expectation about participant behaviors that they go beyond conformity to the formal rules of the game? Almost 25% of the survey questions (Q4, Q10, Q13, Q16, Q19, Q22, Q28) address actions that, while not regulated, express generosity of spirit and respect for the opponent. While virtuous, should these actions be expectations of someone with good sportpersonship tendencies? According to Keating (1988), it is truly asking too much of those engaged in serious athletics competition to cultivate an unselfish and cooperative effort with their opponents. He believes while it is essential to make a contest a true test of abilities by equal application of the rules, the ultimate goal of competition is for the athlete to demonstrate superiority. Keating believes requiring more than fair play from participants is counter to that objective.

On the other hand, Simon (2004) advocates that “good competitors want to be challenged by worthy opponents...and should want to promote conditions under which other athletes can play at their best” (p. 53-54). The question of just how much generosity

towards opponents is required and what constitutes the ideal creates the dichotomy of striving for excellence in athletics competition while upholding the highest standard of good sporting behavior. The complexity and paradox that exists is the result of attempts to reconcile controversial moral issues regarding sportspersonship.

Limitations

Earlier in this paper the potential scope and limitations of this current study were outlined. This section highlights those that most affect the level of generalization that may be garnered from the analysis of the results.

To begin with, this is a case study of one institution and the responses of student-athletes at that institution. As a case study, the results are inherently non-generalizable. While the findings may have some relevance to other institutional settings, ultimately they only apply directly to the institution studied. Attempts to generalize the results to a broader population must be done with caution. This is especially important in light of the task undertaken by this current study to pilot an instrument with a yet un-studied population of U.S. collegiate athletes.

The choice of the institution studied created another limitation. Selecting a college where the researcher is employed facilitated access to the subjects needed for the study. However, it also created an inherent bias, which contributed to the limitations of the study.

Another limitation includes the quantitative nature of the survey instrument itself, which required subjects to express their opinion based solely on a 5-point Likert scale.

While this format is useful for ease of administration to large numbers of individuals in a short period of time, it clearly limits the response. Often it is difficult to express opinions or views on a five-point scale rather than through a verbal response, which would allow for further clarification. This scale also did not include a “don’t know” category, forcing the respondent to choose something, or leave the answer blank. Muijs (2004) suggests that without the “don’t know” category, responses tend to mitigate to a central tendency.

Finally, the risk of the reporting of socially desirable responses presents another challenge. This is particularly relevant to the current study because of the relationship of the researcher to the institution and the potential for the student-athletes to want to present themselves in a favorable light. Although the surveys were completely anonymous and measures were taken to remove the researcher from the direct administration of the survey, this limitation still exists. In addition, the intended sportspersonship behavior reported by the subjects may not be consistent with their real-life actions. Behavior intentions stated by the respondents therefore may not accurately predict actual sportspersonship behaviors.

Conclusions

In spite of the many identified complexities surrounding sportspersonship in competitive athletics, the value of fair play is generally believed to be fundamental to the pursuit of honorable victory. The ability to measure sportspersonship orientations and tendencies, while difficult, is possible, and is essential to promoting the highest ideals of competition. This current study undertook the task of testing an instrument designed to do so.

This current study tested the validity and reliability of the EMSOS for use among U.S. collegiate athletes. The research questions considered for this study included:

- Q1: What are the responses to the survey questions relative to the demographic characteristics? [descriptive statistics]
- Q2: Do results from this sample yield a pattern of factors similar to the factor analysis results of previous research studies? [construct validity]
- Q3: Does the internal consistency of the instrument match that of previous research attempts? [reliability]
- Q4: To what extent do the EMSOS subscale results correlate with the corresponding hypothetical scenario results? [construct validity]
- Q5: Do the instrument scores agree with trends from previous research studies as they relate to demographic variables (sex, sport, class year, age, level of competitiveness, or number of years involved in competitive sports)? [concurrent validity]

More global conclusions for this current study include finding most subscales and the EMSOS overall to be valid and reliable measures for assessing sportspersonship tendencies among a select population of U.S. collegiate athletes. In addition, and in agreement with prior research, this study demonstrates relationships between sportspersonship orientations and the demographic variables of sex, type of sport, physical nature of sport, and length of involvement in competitive sports. Higher mean scores of the global sportspersonship index are evident for female athletes versus male athletes, individual-sport athletes versus team-sport athletes, non-contact versus contact sport athletes, and athletes with fewer versus more years of involvement in competitive

sports. The findings also suggest that class year, age, and scholarship status do not necessarily result in different sportspersonship orientations.

This current study supports a modification of the EMSOS to exclude the “negative approach” subscale. This recommendation is made based on the problematic reliability and validity findings of that subscale. The “negative approach” subscale had unacceptable reliability and very weak correlation to the corresponding subscale, indicating weak construct validity. The principal component analysis also did not identify the “negative approach” as a factor of variance. The “full commitment” subscale caused initial concern based on the factor analysis, but other measures of reliability and validity produced favorable results.

It also appears that the addition of the sixth subscale (instrumental aggression) to the original version of the tool (the MSOS), improved the psychometrics of the instrument. Therefore, it is recommended that the “instrumental aggression” subscale be retained in the instrument, but the “negative approach” subscale be removed. This modified structure therefore includes five subscales (“social conventions”, “respect for rules/officials”, “full commitment”, “respect for opponent”, and “instrumental aggression”), and is referred to as the revised EMSOS. Given the identified limitations with the Likert scale, it is also recommended that a “don’t know” category be added to the response scale of the EMSOS. This current study should provide researchers and practitioners with the knowledge that the revised EMOS is a valid and reliable instrument that can be used to assess the sportspersonship orientations of U.S. collegiate athletes.

Implications

This study supports the use of the revised EMSOS as a valid and reliable tool for measuring sportpersonship tendencies among a select population of U.S. collegiate athletes. In addition, similar to prior research, this study demonstrated relationships between sportpersonship orientations and the demographic variables of sex, type of sport, physical nature of sport, and length of involvement in competitive sports.

Probably the biggest implication from the substantiation of this tool as a valid and reliable instrument is the potential for its expanded use within segments of the U.S. college athlete population. Prior to this current study, the instrument had been normed only to a Quebec middle-school population (Vallerand, Briere et al., 1997). Subsequent research included studies with different international as well as U.S. populations, but always with a similar adolescent age-group (D'Arripe-Longueville et al., 2006; Miller et al., 2004; Ommundsen et al., 2003; Ryska, 2003; Stornes & Bru, 2002). Substantiation of this test for use with the U.S. collegiate population extends its use to include a large number of college-age athletes. This study therefore provides endorsement of the revised EMSOS for the measurement and further study of unsporting behaviors at the college and university level.

This is important for several reasons. First, given the important role of sport in developing social-moral competencies, sportpersonship has increasingly become a topic of interest for researchers (Bredemeier & Shields, 1984a; Ommundsen et al., 2003; Proios et al., 2006; Ryska, 2003). The ability to measure sportpersonship tendencies is essential to the study of the topic. Prior research has outlined the difficulties in defining

and measuring this multidimensional phenomenon (Arnold, 2003; Feezell, 1986; Keating, 2001; Polley, 1983; Vallerand et al., 1996). There is clearly a need for a substantiated tool that can be used to measure sportspersonship tendencies in a wide range of populations to be studied.

As well, the use of this tool can assist colleges in fulfilling their educational mission. Educational institutions purport to uphold the highest standards of sportspersonship within their athletics programs. Yet research has shown this goal to often be in conflict with the overarching goal of winning (Beller et al., 1995; Papp & Pristoka, 1995; Shields & Bredemeier, 1995). Measuring the sporting behaviors of participants may assist in assessing and improving sportspersonship intentions.

The often quoted business saying “what gets measured gets done” (Peters, 1986) addresses the value of the quantitative measurement of quality in order to generate action. In this case, measuring sportspersonship tendencies can generate the important information needed for creating means for improvement. Intervention programs, by design, can draw upon the literature specific to the social learning theory (using operant conditioning, reinforcement, and modeling), and the structural development theory (through use of moral dialogue), in order to stimulate moral growth.

The effectiveness of intervention programs could be measured using the revised EMSOS as both pre- and post-test. The revised EMSOS could also be used in conjunction with other instruments for the purpose of drawing conclusions about relationships with other phenomena. This could include those phenomena with

hypothesized relationships with sporting behavior including achievement goals, motivational climate, participation goals, and dispositional competitiveness.

The results specific to demographic variables and their relationship to sportpersonship tendencies have implications for the leaders of collegiate athletics programs, both administrators and coaches. Leadership, moral reasoning, and intervention programming could and should be designed to educate all athletes about expectations regarding sporting behavior. In addition, an increased vigilance could be offered for those most “at risk” for negative sportpersonship orientations – male, team, contact sport athletes, and those with many years of involvement in competitive sports. The venue for this educational programming already exists on most campuses through the NCAA Life Skills program.

There are even broader implications of this research as the results apply to the moral development of athletes as future leaders in our world today. The effects of the sport experience can and does impact the leadership qualities and moral competencies for athletes’ future endeavors. Good sportpersonship tendencies developed through athletics participation has the potential to positively impact ethical behaviors and moral decision-making for athletes that enter the business world.

The quote [most often attributed to Arthur Wellesley, Duke of Wellington] “the battle of Waterloo was won on the playing-fields of Eton” (Kellaway, 2008) speaks to this very issue. “This statement is usually taken to mean that the British, under Wellington, were able to defeat the French, under Napoleon, at Waterloo, because of the discipline and ethos of organised (sic) games and sports, learned by the officers on the

playing fields of Eton” (Proudfoot, 2003). This assertion suggests that there is link between sports as a preparation for battle.

The concept metaphorically extends to the boardroom as well. Recognizing the role of athletics in developing ethical and competent government and business leaders, in 1967 the NCAA established the Theodore Roosevelt Award. This annual award is given to an individual “for whom competitive athletics in college and attention to physical well-being thereafter have been important factors in a distinguished career of national significance and achievement” (NCAA, n.d.-b). Examples of award recipients include Former U.S. Secretary of State Madeleine Albright, Former Senator/Astronaut John Glenn, CEO Kraft Group Robert Kraft, and Founder of Special Olympics Eunice Kennedy Shriver.

At less prominent levels perhaps, but just as important, many former athletes have gone on to become leaders in their chosen professions at the community and state level. The social competencies of dedication, teamwork, discipline, and work ethic, are often first learned on the playing fields. Too, the moral competencies of honesty, fairness, and responsibility, can be positive character development outcomes of sport. However, what gets learned through participation in sports is highly dependant on the context in which these ideals are presented and the quality of the leadership present.

This current study therefore has many implications at many levels. First, it provides support for the substantiation of a measurement tool specific to sportspersonship tendencies of college athletes. This measurement can then provide the impetus for action, specifically the improvement of sporting behaviors. Finally, a more broad implication

relates to the potential of leadership development and moral competencies that the sport experience can provide for athletes that become the future leaders in our world today.

Recommendations for Future Research

While this current study provides substantiation for the use of the revised EMSOS to measure sportspersonship tendencies among college athletes, there are many other research opportunities to pursue. The following are recommendations for future research:

- Replicate the present study at other institutions for further substantiation among a wider and more diverse population. In addition to increasing the number of participants studied, adding different institutions with geographic and ethnic diversity would be valuable. In particular, studying athletes enrolled at institutions representing all three NCAA divisions (DI, DII, and DIII) would be particularly valuable in adding to the different “level of competitiveness” dimension. Faith-based institution results could also be compared to secular institution findings.
- Incorporate a mixed methods research protocol. Use the revised EMSOS in combination with qualitative methodology to provide richer data that might accommodate the contextual differences and subtleties of the phenomenon of sportspersonship.
- Include study factors such as interactions, longitudinal testing, different sport settings, and larger sample size in order to better inform the current research knowledge base. Future research could focus on substantiating methods for improving sporting

behaviors and on improving the ability to generalize the findings to a wider population.

- Interaction effects and post-testing could be further pursued. Beyond the findings for main effects, the interaction effects of the Analysis of Variance (ANOVA) could yield valuable results. In addition, a longitudinal aspect of a study, especially one that demonstrates long-term retention of learned good sporting behaviors, would be particularly significant.
- Studies that focus on short but effective treatments as well as delivery in the actual sport setting may also provide vital information. Limited time to prepare student-athletes for competition is always a challenge. Given a choice between time spent on improving skills and strategy or improving sportspersonship, the latter will lose out with most coaches. If a positive change in sporting behaviors can be realized within a short time-frame that can be incorporated in the actual sport setting, it is more likely to be implemented into sport programs.
- Further research could include using the revised EMSOS to investigate the correlation of sportspersonship with other variables that have been hypothesized to have a relationship (level of competitiveness, achievement goals, motivational orientation, and perceived purpose of participation).
- The results of the revised EMSOS could be compared with the results of tests for moral reasoning to determine the relationship between moral reasoning and sportspersonship orientation. The Hahm-Beller Values Choice Inventory (HBVCI; Hahm et al., 1989) was developed as a tool to evaluate moral reasoning in the sport

setting. Comparing the results of the revised EMSOS with the HBVCI could provide interesting data for analysis.

- The revised EMSOS could be administered and the results could be compared to observable sportspersonship behaviors of subjects in field situations. Substantiating the link between self-reported inclinations and observed data could do much to further the validity of the instrument.

For all of the many reasons outlined in the first chapter as well as the implications outlined in this final chapter, the continued study of sporting behavior is essential for learning more about the moral development and promotion of pro-social behaviors of college athletes. Future research studies can continue to illuminate this subject and add to the current body of literature on this important topic.

Postscript Reflection

As I bring closure to this dissertation, I am moved to add a brief subjective reflection of the journey that it has been. As a former athlete, coach, and now an athletics administrator, I have always believed good sporting behavior to be an integral part of sports competition. In my 35-year career to date, I have had countless opportunities to witness what I believe to be both the best and the worst in displays of sporting behaviors. I have often contemplated what role we as educators play in instilling these attitudes and beliefs about acceptable and desirable ways of behaving in sport.

I first discovered the MSOS as an instrument to measure sportspersonship during one of my graduate research class assignments. It led me to ponder whether it would be a

good tool for use in measuring the success of teachings or interventions designed to improve sportspersonship of the athletes at the college where I serve as an athletics administrator. When I recognized that the MSOS had not been validated for use with the collegiate-athlete population, I realized that work must be done before other important efforts could proceed.

This has been quite a labor of love, exploring a topic where I hold great passion. Before I embarked on this journey, I was aware of some, but not all of the many nuances involved with the phenomenon of sportspersonship. In spite of the complexities, this current study has inspired me to be even more vigilant and dedicated to the development of good sporting behavior in the athletics programs where I work.

I am gratified with the results of this current study because I believe the EMSOS can serve as an important resource for those of us in the athletics professions. Sadly, some of the findings of this study do not shed a positive light on the work we do as athletics coaches and administrators. These results highlight the extensive work that must continue in order to positively influence the development of student-athletes.

This is particularly critical for athletics programs in educational settings. Sports participation has the potential to foster prosocial attitudes in participants. But “high stakes” athletics and the mutual quest for excellence may be incompatible. I am not naïve enough to think that the goal of sportspersonship will outweigh the goal of winning for all programs, especially those programs that are economic ventures, rather than true educational entities. However, I do believe that athletics programs belong in the academy *only* if they contribute to the educational mission of the college. For those of us involved

in intercollegiate athletics coaching and administration, this means we have much work ahead of us, as we teach and model good sportspersonship behaviors.

REFERENCES

- Acosta, R. V., & Carpenter, L. (2005). *Title IX*. Champaign, IL: Human Kinetics.
- Aicinena, S. (1999). *One hundred and two days of "Sportscenter": Messages of poor sportsmanship, violence and immorality*. The University of Texas, Odessa, TX.
- Allison, M. T. (1982). Sportsmanship: Variations based on sex and degree of competitive experience. In A. Dunleavy, A. Miracle & C. Rees (Eds.), *Studies in the sociology of sport* (pp. 153-165). Fort Worth, TX: Texas Christian University Press.
- Altemeyer, B. (1988). *Enemies of freedom*. San Francisco: Jossey-Bass.
- APA. (2001). *Publication manual of the American Psychological Association* (5th ed.). Washington, D.C.: American Psychological Association.
- Arnold, P. (2003). Three approaches toward an understanding of sportsmanship. In J. Boxill (Ed.), *Sports ethics*. Malden, MA: Blackwell Publishers Ltd.
- Aronfreed, J. (1968). *Conduct and conscience: The socialization of internalized control over behaviour*. New York: Academic Press.
- Bandura, A. (1977). *Social learning theory*. Englewood Cliffs, NJ: Prentice Hall.
- Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Englewood Cliffs, NJ: Prentice-Hall.
- Baron-Cohen, S. (2003). *The essential difference: Men, women, and the extreme male brain*. London: Allen Lane.
- Beller, J. (1990). A moral reasoning intervention program for Division I athletes -- can athletes learn not to cheat? Unpublished doctoral dissertation, the University of Idaho, Moscow, ID.
- Beller, J., & Stoll, S. (1992). A moral reasoning intervention program for student-athletes. *The Academic Athletic Journal*(Spring), 43-57.

- Beller, J., & Stoll, S. (1995). Moral reasoning of high school students and general students: An empirical study versus personal testimony. *Pediatric Exercise Science*, 7, 352-363.
- Beller, J., Stoll, S., Burkwell, B., & Cole, J. (1995). The relationship of competition and a Christian liberal arts education on moral reasoning of college student athletes. *Research on Christian higher education*, 3, 99-114.
- Bredemeier, B., & Shields, D. (1984a). Divergence in moral reasoning about sport and everyday life. *Sociology of Sport Journal*, 1(4), 348-357.
- Bredemeier, B., & Shields, D. (1984b). The utility of moral stage analysis in the investigation of athletic aggression. *Sociology of Sport Journal*, 1, 138-149.
- Bredemeier, B., & Shields, D. (1986a). Athletic aggression: An issue of contextual morality. *Sociology of Sport Journal*, 3, 15-28.
- Bredemeier, B., & Shields, D. (1986b). Moral growth among athletes and nonathletes: A comparative analysis. *Journal of Genetic Psychology*, 147(1), 7-18.
- Bredemeier, B., & Shields, D. (1994). Applied ethics and moral reasoning in sport. In J. Rest & D. Narvaez (Eds.), *Moral development in the professions* Hillsdale, NJ: L. Erlbaum Associates.
- Bredemeier, B., Shields, D., Weiss, M., & Cooper, B. (1986). The relationship of sport involvement with children's moral reasoning and aggression tendencies. *Journal of Sport Psychology*, 8, 304-318.
- Bredemeier, B., Weiss, M., Shields, D., & Shewchuck, R. (1986). Promoting moral growth in a summer sport camp: The implementation of theoretically grounded instructional strategies. *Journal of Moral Education*, 15(3), 212-220.
- Butler, L. F. (2000). Fair play: Respect for all. *Journal of Physical Education Recreation and Dance*, 71(2), 34-36.

- Center for Ethics. (1998a). *Sample Questions of the RSBH*. Retrieved June 11, 2008, from http://www.educ.uidaho.edu/center_for_ethics/Measurements/Rudd/example_questions.htm
- Center for Ethics. (1998b). *Theoretical information on the HBVCI*. Retrieved June 11, 2008, from http://www.educ.uidaho.edu/center_for_ethics/Measurements/HBVCI/theoretical.htm
- Center for Ethics. (2005). *Glossary of terms frequently used at the center*. Retrieved September 20, 2007, from http://www.educ.uidaho.edu/center_for_ethics/About%20Us/glossary.htm
- Center for Ethics. (n.d.). *Research Facts*. Retrieved June 11, 2008, from http://www.educ.uidaho.edu/center_for_ethics/research_fact_sheet.htm
- Christie, R. (1991). Authoritarianism and related constructs. In J. P. Robinson, P. R. Shaver & L. S. Wrightsman (Eds.), *Measures of personality and social psychological attitudes*. San Diego: Academic Press.
- Cronk, B. (2006). *How to use SPSS: A step-by-step guide to analysis and interpretation* (4th ed.). Glendale, CA: Pyrczak Publishing.
- Crowne, D. P., & Marlowe, D. (1960). A new scale of social desirability independent of psychopathology. *Journal of Consulting Psychology*, 24, 349-354.
- Czaja, R., & Blair, J. (2005). *Designing surveys* (2nd ed.). Thousand Oaks, CA: Pine Forge Press.
- D'Agostino, F. (1988). The ethos of games. In W. J. Morgan & K. V. Meier (Eds.), *Philosophic inquiry in sport*. Champaign, IL: Human Kinetics.
- D'Arripe-Longueville, F., Pantaleon, A., & Smith, A. (2006). Personal and situational predictors of sportpersonship in young athletes. *International Journal of Sport Psychology*, 37, 38-57.
- Driver, J. (2007). *Ethics: The fundamentals*. Malden, MA: Blackwell Publishing.

- Duda, J. L. (1989). Goal perspectives, participation and persistence in sport. *International Journal of Sport Psychology*, 20, 42-56.
- Duda, J. L., & Nicholls, J. G. (1992). Dimensions of achievement motivation in school, work, and sport. *Journal of Educational Psychology*, 84, 290-299.
- Dunn, D. (1999). *The practical researcher: A student guide to conducting psychological research*. Boston, MA: McGraw-Hill.
- Ennis, C. D., Solmon, M. A., Satina, B., Loftus, S. J., Mensch, J., & McCauley, M. T. (1999). Creating a sense of family in urban schools using the "Sport for Peace" curriculum. *Research Quarterly for Exercise and Sport*, 70(3), 273-291.
- Feezell, R. (1986). Sportsmanship. *Journal of Philosophy of Sport*, 12, 1-13.
- Feezell, R. (1988). Sportsmanship. In W. J. Morgan & K. V. Meier (Eds.), *Philosophic inquiry in sport*. Champaign, IL: Human Kinetics.
- Frleigh, W. (1988). Why the good foul is not good. In W. J. Morgan & K. V. Meier (Eds.), *Philosophic inquiry in sport*. Champaign, IL: Human Kinetics.
- Galvan, J. (2006). *Writing literature reviews: A guide for students of the social and behavioral sciences* (3rd ed.). Glendale, CA: Pyczak Publishing.
- Gardner, H. (1983). *Frames of mind: The theory of multiple intelligences*. New York: Basic Books, Inc.
- Gibbons, S. L., & Ebbeck, V. (1997). The effect of different teaching strategies on the moral development of physical education students. *Journal of Teaching in Physical Education*, 17, 85-98.
- Gibbons, S. L., Ebbeck, V., & Weiss, M. R. (1995). Fair play for kids: Effects on the moral development of children in physical education. *Research Quarterly for Exercise and Sport*, 66(3), 247-255.

- Gill, D. L., & Deeter, T. E. (1988). Development of the Sport Orientation Questionnaire. *Research Quarterly for Exercise and Sport*, 59, 191-202.
- Gilligan, C. (1981). Moral development. In A. W. Chickering (Ed.), *The modern American college*. San Francisco: Jossey-Bass
- Gilligan, C. (1982). *In a different voice: Psychological theory and women's development*. Cambridge, MA: Harvard University Press.
- Goldstein, J. D., & Iso-Ahola, S. E. (2006). Promoting sportsmanship in youth sports: Perspectives from sport psychology. *Journal of Physical Education Recreation and Dance*, 77(7), 18-24.
- Goleman, D. (2006). *Social intelligence: The new science of human relationships*. New York: Bantam Dell.
- Graham, G. (2004). *Eight theories of ethics*. New York: Routledge.
- Haan, N. (1983). An interactional morality of everyday life. In N. Haan, R. Bellah, P. Rabinow & W. Sullivan (Eds.), *Social science as moral inquiry* (pp. 218-215). New York: Columbia University Press.
- Haan, N., Aerts, E., & Cooper, B. B. (1985). *On moral grounds: The search for practical morality*. New York: New York University.
- Hahm, C. (1989). Moral reasoning and moral development among general students, physical education majors, and student athletes. Unpublished doctoral dissertation, the University of Idaho, Moscow, ID.
- Hahm, C., Beller, J., & Stoll, S. (1989). The Hahm-Beller Values Choice Inventory in the sport milieu, *The Institute for Ethics*. Moscow: University of Idaho.
- Haskins, M. (1959). A problem-solving test of sportsmanship. Unpublished doctoral dissertation, The Ohio State University.

- Janzen, D. (2006). The acute effects of athletic competition on moral reasoning levels for dis-similar athletic groups. Unpublished doctoral dissertation, University of Southern California.
- Josephson, M. S. (1999). *Pursuing victory with honour: A training program for coaches and athletic directors*. Paper presented at the International Coach Education Conference Proceedings, Australia.
- Kavussanu, M., & Roberts, G. (2001). Moral functioning in sport: An achievement goal perspective. *Journal of Sport and Exercise Psychology*, 23, 37-54.
- Keating, J. (1988). Sportsmanship as a moral category. In W. J. Morgan & K. V. Meier (Eds.), *Philosophic inquiry in sport*. Champaign, IL: Human Kinetics.
- Keating, J. (2001). Sportsmanship as a moral category. In W. J. Morgan, K. V. Meier & A. J. Schneider (Eds.), *Ethics in sport*. Champaign, IL: Human Kinetics.
- Kellaway, L. (2008, March 25, 2009). *Boardroom battles won on the playing fields of youth*, from <http://www.businessday.co.za/specialist/articles/OpenColumn.aspx?ID=BD4A800021>
- Kohlberg, L. (1976). Moral stages and moralization: The cognitive-developmental approach. In T. Lickona (Ed.), *Moral development and behavior* (pp. 31-53). New York: Holt, Rinehart & Winston.
- Lanyon, R., & Goodstein, L. (1982). *Personality assessment* (2nd ed.). New York: John Wiley & Sons.
- Lapchick, R. E. (2006). Recommendations. In R. E. Lapchick (Ed.), *New game plan for college sports*. Westport, CT: Praeger Publishers.
- Leaman, O. (1988). Cheating and fair play in sport. In W. J. Morgan & K. V. Meier (Eds.), *Philosophic inquiry in sport*. Champaign, IL: Human Kinetics.

- Lemyre, P. N., Roberts, G., & Ommundsen, Y. (2002). Achievement goal orientations, perceived ability, and sportpersonship in youth soccer. *Journal of Applied Sport Psychology, 14*, 120-136.
- Lickona, T. (1991). *Educating for character: How our schools can teach respect and responsibility*. New York: Bantam books.
- Lodl, K. (2005). Developing a game plan for good sportsmanship. *New Directions for Youth Development, Winter 2005*(108), 127-134.
- May, R. A. B. (2001). The sticky situation of sportsmanship: Contexts and contradictions in sportsmanship among high school boys basketball players. *Journal of Sport and Social Issues, 25*(4), 372-389.
- McCutcheon, L. E. (1999). The Multidimensional Sportpersonship Orientation Scale has psychometric problems. *Journal of Social Behavior and Personality, 14*(3), 439-444.
- McMahan, R. (1978). *The development of an instrument for assessing sportsmanship attitudes*. Unpublished Doctoral Dissertation, University of Tennessee, Knoxville.
- Miller, B., Roberts, G., & Ommundsen, Y. (2004). Effect of motivational climate on sportpersonship among competitive youth male and female football players. *Scandinavian Journal of Medicine and Science in Sports, 14*, 193-202.
- Mischel, W., & Moore, B. (1966). Effects of attention to symbolically-presented rewards upon self control. *Journal of Personality and Social Psychology, 3*, 390-396.
- Mitchell, C. P. (2000). *Investigating the nature and validity of DIT2 using four validity criteria*. University of Minnesota, Minneapolis, MN.
- Morgan, W. J., Meier, K. V., & Schneider, A. J. (2001). *Ethics in Sport*. Champaign, IL: Human Kinetics.
- Muijs, D. (2004). *Doing quantitative research in education with SPSS*. Thousand Oaks, CA: Sage Publications.

- NCAA. (2003). *Report on the sportsmanship and fan behavior summit*. Indianapolis, IN.
- NCAA. (2007b). *Definition of individual sports*. Retrieved October 14, 2007, from <https://goomer.ncaa.org/wdbctx/LSDBi/LSDBI.home>
- NCAA. (2007c). *Definition of team sports*. Retrieved October 14, 2007, from <https://goomer.ncaa.org/wdbctx/LSDBi/LSDBI.home>
- NCAA. (2007d). *Definition of varsity intercollegiate sport*. Retrieved October 14, 2007, from <https://goomer.ncaa.org/wdbctx/LSDBi/LSDBI.home>
- NCAA. (n.d.-a). *Differences between Divisions I, II, and III*. Retrieved October 15, 2007, from <http://www.ncaa.org/wps/ncaa?ContentID=418>
- NCAA. (n.d.-b). *Theodore Roosevelt Award*. Retrieved March 26, 2009, from <http://www.ncaa.org/wps/ncaa?ContentID=667>
- NCAA Life Skills. (2007). *NCAA Life Skills*. Retrieved June 15, 2008, from the NCAA Web site: <http://www.ncaa.org/wps/ncaa?ContentID=937>
- Nisivoccia, J. D. (1997). *An educational model to enhance sportsmanship of male high school athletes during interscholastic athletic events*. Unpublished Dissertation, Nova Southeastern University, Fort Lauderdale, FL.
- Olympic Motto and Olympic Creed*. (n. d.). Retrieved May 30, 2007 from <http://www.mapsofworld.com/olympic-trivia/olympic-motto.html>
- Ommundsen, Y., Roberts, G. C., Lemyre, P. N., & Treasure, D. (2003). Perceived motivational climate in male youth soccer: Relations to social-moral functioning, sportpersonship and team norm perceptions. *Psychology of Sport and Exercise*, 4(2003), 397-413.
- Oxford Online Dictionary. (n.d.). Retrieved May 27, 2008, from <http://www.askoxford.com>

- Papp, G., & Pristoka, G. (1995). Sportsmanship as an ethical value. *International Review for the Sociology of Sport*, 30(3-4), 375-389.
- Pearson, K. (1988). Deception, sportsmanship, and ethics. In W. J. Morgan & K. V. Meier (Eds.), *Philosophic inquiry in sport*. Champaign, IL: Human Kinetics.
- Peters, T. (1986). *What gets measured gets done*. Retrieved March 26, 2009, from http://www.tompeters.com/col_entries.php?note=005143&year=1986
- Piaget, J. (1932/1965). *The moral judgment of the child*. New York: Free Press.
- Piliavin, J. A., Dovidio, J. F., Gaertner, S. L., & Clark, R. D. (1981). *Emergency intervention*. New York: Academic Press.
- Polley, J. C. (1983). *The role of university sport in setting standards of fair play: A cross-cultural perspective*. Paper presented at the FISU Conference - Universiade July '83 in association with the Xth HISPA Congress, Edmondton, Alberta, Canada.
- Proios, M., & Doganis, G. (2006). Age and education in moral judgment of participants in team sports. *Perceptual and Motor Skills*, 102, 247-253.
- Proios, M., Doganismo, G., & Proios, M. (2006). Form of athletic exercise, school environment, and sex in development of high school student's sportsmanship. *Perceptual and Motor Skills*, 103(1), 99-106.
- Proudfoot, M. (2003). *British public schools and the history of sport*. Retrieved March 26, 2009, from http://www.okayama-h.ed.jp/micheal_e.html
- Rawls, J. (1971). *A theory of justice*. Cambridge, MA: Belknap Press of Harvard University Press.
- Rest, J. (1984). The major components of morality. In W. Kurtines & J. Gewirtz (Eds.), *Morality, moral behavior, and moral development*. New York: Wiley.
- Rest, J., & Narvaez, D. (1998). *Defining Issues Test, version 2*: University of Minnesota.

- Rest, J., Narvaez, D., Thoma, S. J., & Bebeau, M. (1999). DIT2: Devising and testing a revised instrument of moral judgment. *Journal of Educational Psychology*, 91(4), 644-659.
- Ruane, J. (2005). *Essentials of research methods: A guide to social science research*. Malden, MA: Blackwell Publishing.
- Rudd, A. (1989). Sport's perceived ability to build character. Unpublished doctoral dissertation, the University of Idaho, Moscow, ID.
- Rudd, A., & Stoll, S. (2004). What type of character do athletes possess? An empirical examination of college athletes versus college non athletes with the RSBH value judgment inventory, *The Sport Journal* (Vol. 17).
- Russell, G. (1993). *The social psychology of sport*. New York: Springer-Verlag.
- Russell, J. S. (1998). Are rules all an umpire has to work with? *Journal of the Philosophy of Sport*, 26(9).
- Ryska, T. A. (2003). Sportsmanship in young athletes: The role of competitiveness, motivational orientation, and perceived purposes of sport. *The Journal of Psychology*, 137(3), 273-293.
- Shields, D., & Bredemeier, B. (1995). *Character Development and Physical Activity*. Champaign, IL: Human Kinetics.
- Shields, D., Bredemeier, B., Gardner, D., & Bostrom, A. (1995). Leadership, cohesion, and team norms regarding cheating and aggression. *Sociology of Sport Journal*(12), 324-336.
- Simon, R. (2004). *Fair play: The ethics of sport* (Second ed.). Boulder, CO: Westview Press.
- Stapleton, C. (1997). *Basic concepts and procedures of confirmatory factor analysis*. Paper presented at the annual meeting of the Southwest Educational Research Association, Austin, TX. January 1997.

- Stoll, S., & Beller, J. (1995). Moral reasoning of Division III and Division I athletes: Is there a difference?, *Paper presented at the Annual Meeting of the American Alliance of Health, Physical Education, Recreation, and Dance*. Portland, OR.
- Stoll, S., & Beller, J. (1998). Can character be measured? *Journal of Physical Education Recreation and Dance*, 69(1), 19-24.
- Stornes, T., & Bru, E. (2002). Sportspersonship and perceptions of leadership. An investigation of adolescent handball players' perceptions of sportspersonship and relations with perceived leadership. *European Journal of Sport Science*, 6(2), 1-15.
- Stornes, T., & Ommundsen, Y. (2004). Achievement goals, motivational climate and sportspersonship: A study of young handball players. *Scandinavian Journal of Educational Research*, 48(2), 205-220.
- Stuart, M., & Ebbeck, V. (1995). The influence of perceived social approval on moral functioning in youth sport. *Pediatric Exercise Science*, 7(270-280).
- Timmons, M. (2002). *Moral theory: An introduction*. Boulder, CO: Rowman & Littlefield Publishers, Inc.
- Vallerand, R., Briere, N., Blanchard, C., & Provencher, P. (1997). Development and validation of the multidimensional sportspersonship orientation scale. *Journal of Sport and Exercise Psychology*, 19, 197-206.
- Vallerand, R., Deshaies, P., & Cuerrier, J. (1997). On the effects of the social context on behavioral intentions of sportsmanship. *International Journal of Sport Psychology*, 28, 126-140.
- Vallerand, R., Deshaies, P., Cuerrier, J., Briere, N., & Pelletier, L. (1996). Toward a multidimensional definition of sportsmanship. *Journal of Applied Sport Psychology*, 8(1), 89-101.
- Vallerand, R., & Losier, G. (1994). Self-determined motivation and sportsmanship orientations: An assessment of their temporal relationship. *Journal of Sport and Exercise Psychology*, 16, 229-245.

- Volkwein, K. (1995). Ethics and top-level sport - a paradox? *International Review for the Sociology of Sport*, 30(3/4), 311.
- Walling, M. D., & Duda, J. L. (1995). Goals and their associations with beliefs about success in and perceptions of the purposes of physical education. *Journal of Teaching in Physical Education*, 14(140-156).
- Wandzilak, T., Carroll, T., & Ansorge, C. J. (1988). Values development through physical activity: Promoting sportsmanlike behaviors, perceptions, and moral reasoning. *Journal of Teaching in Physical Education*, 37, 13-22.
- Weiss, M. R., & Bredemeier, B. J. (1990). Moral development in sport. In K. B. Pandolf & J. O. Holloszy (Eds.), *Exercise and sport sciences reviews* (Vol. 18, pp. 331-378). Baltimore: Williams and Wilkins.
- Wright, B., & Stone, M. (1999). *Measurement essentials* (2nd ed.). Wilmington, DE: Wide Range, Inc.
- Yaremko, R., Harari, H., Harrison, R., & Lynn, E. (1982). *Reference handbook of research and statistical methods in psychology: For students and professionals*. New York: Harper & Row Publishers.

Appendix A: EMSOS

The Multidimensional Sportspersonship Orientations Scale (MSOS-25) plus E-5

SPORT: Indicate which sport you refer to while answering the next 30 questions (ex: baseball, hockey, badminton, etc.)

For each of the following items, circle the number that best represents the extent to which the item corresponds to you with respect to the sport you identified above.

Doesn't correspond to me at all 1	Corresponds to me a little 2	Corresponds to me partly 3	Corresponds to me a lot 4	Corresponds to me exactly 5
1. When I lose, I congratulate the opponent whoever he or she is.	1	2	3	4 5
2. I obey the referee.	1	2	3	4 5
3. In competition, I go all out even if I'm almost sure to lose.	1	2	3	4 5
4. I help the opponent get up after a fall.	1	2	3	4 5
5. I compete for personal honors, trophies, and medals.	1	2	3	4 5
6. I often play aggressively to win the game.	1	2	3	4 5
7. After a defeat, I shake hands with the opponents' coach.	1	2	3	4 5
8. I respect the rules.	1	2	3	4 5
9. I don't give up even after making many mistakes.	1	2	3	4 5
10. If I can, I ask the referee to allow the opponent who has been unjustly disqualified to keep on playing.	1	2	3	4 5
11. I criticize what the coach makes me do.	1	2	3	4 5
12. On defense I often play aggressively to prevent a score.	1	2	3	4 5
13. After a competition, I congratulate the opponent for his good performance.	1	2	3	4 5
14. I really obey all rules of my sport.	1	2	3	4 5
15. I think about ways to improve my weaknesses.	1	2	3	4 5
16. When an opponent gets hurt, I ask the referee to stop the game so that he or she can get help.	1	2	3	4 5
17. After a competition, I use excuses for a bad performance.	1	2	3	4 5
18. When tied late in the game, if an opponent tries to score I will try to stop him or her even though I will have to break the rules.	1	2	3	4 5
19. After a win, I acknowledge the opponent's good work.	1	2	3	4 5

20. I respect the referee even when he or she is not good.	1	2	3	4	5
21. It is important to me to be present at all practices.	1	2	3	4	5
22. If I see that the opponent is unjustly penalized, I try to rectify the situation.	1	2	3	4	5
23. When my coach points out my mistakes after a competition, I refuse to admit that I made those mistakes.	1	2	3	4	5
24. I often tackle a skillful opponent extra hard to intimidate him/her.	1	2	3	4	5
25. Win or lose, I shake hands with the opponent after the game.	1	2	3	4	5
26. I respect an official's decision even if he or she is not the referee in chief.	1	2	3	4	5
27. During practices, I go all out.	1	2	3	4	5
28. If by misfortune, an opponent forgets his or her equipment, I lend him my spare one.	1	2	3	4	5
29. If I make a mistake during a crucial time of the match, I get angry.	1	2	3	4	5
30. I often use physical force to make opponents annoyed so that they make mistakes.	1	2	3	4	5

Please answer the following questions:

Sex: _____

Current Age: _____

Class Year: _____

Scholarship Athlete: Yes or No

MSOS © Robert J. Vallerand, Nathalie M. Brière, Céline M. Blanchard, & Pierre J. Provencher, 1997
EMSOS Extended version Stornes and Bru, 2002 (questions 6, 12, 18, 24, 30).

SCORING KEYS - EMSOS-30

1, 7, 13, 19, 25 Respect for social conventions

2, 8, 14, 20, 26 Respect for the rules and the officials

3, 9, 15, 21, 27 Respect for one's full commitment toward sport participation

4, 10, 16, 22, 28 Respect and concern for the opponent

5, 11, 17, 30, 29 Negative approach toward the practice of sport

6, 12, 18, 24, 30 Instrumental aggressive behavior

Appendix B: Hypothetical Scenarios

After reading the scenario, participants will respond based on the following scale:

Doesn't correspond to me at all 1	Corresponds to me a little 2	Corresponds to me partly 3	Corresponds to me a lot 4	Corresponds to me exactly 5
---	------------------------------------	----------------------------------	---------------------------------	-----------------------------------

Respect for social conventions

Robert is a talented swimmer who is competing in the conference championship in the 100 meter free-style event. Although he is seeded first in the event, he knows he will face some top competition. His team is counting on him to win this race in order to pull ahead in the standings. Despite a great effort, Robert is beat out in the finals by another swimmer who is in the next lane. This is a devastating loss and Robert just wanted to crawl out of the pool and go over to his team bench. Instead, he reaches over the lane line and shakes hands with his opponent while congratulating him for a great race. If you were in this situation, to what extent would your behavior correspond to that of Robert?

Respect for the rules and officials

In the later innings of a crucial softball game, Courtney makes good contact at bat and sprints hard to beat out the throw to first. It's a close play, and she is called out by the umpire. It is clear to Courtney, however, that the first base player pulled her foot from the bag, and that in her opinion she should have been called safe. In spite of the bad call by the referee, she accepts the decision and says nothing. If you were in this situation, to what extent would your behavior correspond to that of Courtney? _____

Respect for one's full commitment toward sport participation

Maddy is a naturally talented tennis athlete that doesn't have to work very hard to succeed. She is clearly the best player on the team. Maddy often doesn't give her full effort in practice, believing it is best to save it for when it really counts – in competition. If you were in this situation, to what extent would your behavior correspond to that of Maddy? _____

Respect and concern for the opponent

Tim is engaged in a cross country race with a conference rival. He notices as an opposing runner ahead of him loses his balance, stumbles, and takes a fall. Realizing he could use some help, Tim takes time to offer his hand to help pull his opponent up before continuing with the race. If you were in this situation, to what extent would your behavior correspond to that of Tim? _____

Negative approach toward the practice of sport

Jane's basketball team is in the conference finals and she is excited because if they win they will each get a trophy. The game doesn't go as well as planned and Jane herself doesn't have a great performance. During a time-out she is so frustrated that she shows her anger and starts to blame her teammates for the poor performance. Later in the locker room Jane is particularly critical of the coach and says his decisions cost them the game. If you were in this situation, to what extent would your behavior correspond to that of Jane? _____

Instrumental aggressive behavior

James is in a heated soccer contest late in the game. His opponent has intercepted a pass and has broken away, headed into a one-on-one situation with the goalie. James is in a position to stop the attack, but to do so he must do an illegal tackle. Even though he knows it is against the rules and may result in injuring his opponent, James decides to make the illegal tackle so that the opponent will be stopped from taking a shot on goal. If you were in this situation, to what extent would your behavior correspond to that of James? _____

Appendix C: List of Expert Panel Members

These individuals were involved in the scrutiny of the hypothetical scenarios in determining that they match with the specific subscales of the EMSOS.

Dr. David Landers
Professor of Psychology
Saint Michael's College
One Winooski Park
Colchester, VT 05439

Dr. Robert Simon
Professor of Philosophy
Hamilton College
198 College Hill Road
Clinton, NY 13323

Dr. Robert J. Vallerand
Professor and Director
Social Research Laboratory
University of Quebec at Montreal
Montreal, Quebec, CANADA H3C 3P8

Appendix D: IRB Approval

The University of Vermont

COMMITTEES ON HUMAN RESEARCH

SERVING THE UNIVERSITY OF VERMONT
AND FLETCHER ALLEN HEALTH CARE
WEB SITE: [HTTP://WWW.UVM.EDU/IRB/](http://www.uvm.edu/irb/)

RESEARCH PROTECTIONS OFFICE

OFFICE OF SPONSORED PROGRAMS
245 SOUTH PARK, SUITE 900, COLCHESTER, VT 05446
TELEPHONE: (802) 656-5040 FAX: (802) 656-5041

October 20, 2008

MEMO TO: Geraldine Knortz, M.Ed.
(Faculty Sponsor: Herman Meyers, Ph.D.)

FROM: Gale Weld, Research Review Administrator

SUBJECT: CHRBS 09-032
"A Case Study: Assessing the Validity and Reliability of the Multidimensional
Sportspersonship Orientation Scale Among College at a Catholic Residential
Liberal Arts College in New England"

Attached is a signed assurance form which certifies that this application has been reviewed and approved. If applicable, the original form, along with a copy of any modifications in the research plan required by the Committee should be sent to the funding agency; you should make a copy for your files.

Also enclosed is a dated copy of your approval for Waiver of Documentation of Informed Consent.

Federal regulations and University policy require that investigators provide the Committee with the information noted below as the project proceeds. This is essential to maintain accurate protocol files.

- 1) Prompt notice of any adverse events, protocol deviations or other unanticipated problems involving risks to subjects or others must be reported on the appropriate safety form(s) which are available on the Committee's website.
- 2) Submission of any proposed protocol modifications which affect human subjects for review prior to implementation.
- 3) A brief periodic update on the progress of the project due in **OCTOBER, 2009**; the appropriate forms will be sent to you by this office prior to that date.
- 4) The date on which the protocol becomes inactive.
- 5) A copy of all recruitment notices and/or advertisements for human subjects must be approved by the Committee on Human Research prior to printing or posting. Contact the Committee office for guidelines.

NOTES:

1. Copies of the original consent form containing the CHRBS approval stamp with the expiration date included must be used. Also, the copy of the consent form which is provided to the subject must be signed and dated.
2. All Clinical Cancer Research Protocols must receive approval from both CHRBS and the Vermont Cancer Center's (VCC) Protocol Review Committee. An "Approval to Activate" must be obtained from the VCC prior to commencement of any part of the protocol, including accrual of subjects.
3. For any action requiring full committee review, the expiration date will be based on the date of the meeting at which action was taken. The approval period is based on the level of risk, but can be no more than one year from the date of the meeting.
4. Protocols with a Data Safety and Monitoring Board (DSMB), must promptly submit DSMB reports to the Committee.

The University of Vermont
COMMITTEES ON HUMAN RESEARCH
SERVING THE UNIVERSITY OF VERMONT
AND FLETCHER ALLEN HEALTH CARE
WEB SITE: www.uvm.edu/irb

RESEARCH PROTECTIONS OFFICE
OFFICE OF SPONSORED PROGRAMS
245 South Park, Suite 900, Colchester, VT 05446
Telephone (802) 656-5040 FAX: (802) 656-5041

CHRBS# : 09-032*

PROTECTION OF HUMAN SUBJECTS ASSURANCE

Title: A Case Study: Assessing the Validity and Reliability of the Multidimensional Sportspersonship Orientation Scale Among College at a Catholic Residential Liberal Arts College in New England

Principal Investigator: Geraldine Knortz M.Ed.

Institution: University of Vermont and State Agricultural College, Burlington, VT 05405

This institution has an approved assurance of compliance on file with the Department of Health and Human Services which covers this activity.

Assurance number for University of Vermont and State Agricultural College: FWA 00000723

IRB number: IRB 00000486

(Fletcher Allen Health Care Assurance number: FWA 00000727)

CERTIFICATION OF IRB REVIEW

X This activity has been reviewed and approved by an IRB in accordance with the requirements of 45 CFR 46, including its relevant Subparts; and, when applicable, with the requirements of 21 CFR 50 and 21 CFR 56.

Date of approval OCT 15 2008
Date of expiration OCT 14 2009

Full IRB review _____

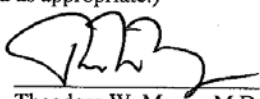
Expedited review X

____ This activity contains multiple projects, some of which have not been reviewed. The IRB has granted approval on condition that all projects covered by 45 CFR 46 will be reviewed and approved before they are initiated and that appropriate further certification will be submitted.

As a condition of approval, this institution's Committee on Human Research required _____ did not require X changes and/or modifications to the above referenced application. (A list of required changes and/or modifications is attached as appropriate.)

Institutional Signature/Date:

Name and Title of Official:

 10/15/2008
Theodore W. Marcy, M.D., MPH, Chair, Committee on Human
Research in the Behavioral Sciences

Date: 26 September 2008

TO: Geri Knortz

RE: **IRB08-019**

CATEGORY: Expedited 2-7

APPROVAL DATE: 9/26/08

EXPIRATION DATE: 9/01/09

*TITLE: A CASE STUDY: ASSESSING THE VALIDITY AND RELIABILITY OF THE
MULTIDIMENSIONAL SPORTSPERSONSHIP ORIENTATION SCALE AMONG COLLEGE
ATHLETES AT A CATHOLIC RESIDENTIAL LIBERAL ARTS COLLEGE IN NEW ENGLAND*

The Saint Michael's College Institutional Review Board (IRB) review of this project is complete and I am pleased to advise that the rights and welfare of the human subjects appear to be adequately protected and methods to obtain informed consent are appropriate. Therefore, the IRB has approved this project.

RENEWALS: IRB approval is valid until the expiration' date listed above. Projects continuing beyond this date must be renewed with the renewal form. A maximum of four such expedited renewals are possible. Investigators wishing to continue a project beyond that time need to submit a 5-year application for a complete review.

REVISIONS: IRB must review any changes in procedures involving human subjects, prior to initiation of the change. If this is done at the time of renewal, please include a revision form with the renewal. To revise an approved protocol at any other time during the year, send your approval and reference the project's IRB# and title. Include in your request a description of the change and any revised instruments, consent forms or advertisements that are applicable.

PROBLEMS/CHANGES: Should either of the following arise during the course of the work, notify IRB promptly: 1) problems (unexpected side effects, complaints, etc.) involving human subjects, or 2) changes in the research environment or new information indicating greater risk to the human subjects than existed when the protocol was previously reviewed and approved.

If we can be of further assistance, please contact us at (802) 654-2383 or via email rcarrico@smcvt.edu. Please note that all IRB forms are located in the Public Folders.

Regards,

Renee Carrico

Dr. Renee L. Carrico, Chair
Institutional Review Board
Department of Psychology, Box 399
St. Michael's College
Colchester, VT 05439

Appendix E: Information Sheet

Research Project: Measuring Sportspersonship: Assessing a scale for sportspersonship in college athletes.

Principal Investigator: Geri Knortz, M. Ed.

Faculty Sponsor: Dr. Bud Meyers, Associate Professor of Education, Univ. of Vermont

You are being invited to take part in this research study because you are a student-athlete at Saint Michael's College and are over 18 years of age. This survey is being conducted by Geri Knortz in fulfillment of the requirements for the degree of doctor of education in the Educational Leadership and Policy Studies program at the University of Vermont. She is also the Director of Athletics at Saint Michael's College, but during this study, she is only acting as a doctoral student.

Why Is This Study Being Conducted?

This project focuses on sportspersonship attitudes of collegiate student-athletes. The purpose of this study is to examine the validity and reliability of a recently developed and expanded tool to measure sportspersonship. Information shared as part of this study will be used to inform practice and programs around sportspersonship.

How Many People Will Take Part In This Study?

All current student-athletes at Saint Michael's College will be invited to participate in this study.

What Is Involved In This Study?

Participation in this study will consist of completion of a short written survey that asks you to indicate how closely certain actions correspond to you personally as an athlete. The survey should take approximately 10 minutes to complete. The survey is completely anonymous. This study only involves the completion of the survey. There will be no attempt to assess your actual or observed sportspersonship tendencies in relation to this study.

What Are The Risks And Discomforts Of The Study?

There are no foreseeable risks associated with this study. Your involvement in the study will have no consequences, disciplinary or otherwise, for you or your sports team.

What Are The Benefits Of Participating In The Study?

There may be no direct benefits to you for participating. Data gained from your survey will become the findings for the dissertation. These findings may add to the body of knowledge related to sportspersonship orientations of collegiate athletes.

Are There Any Costs?

The only cost is your time to participate.

What is the Compensation?

You will not receive any compensation for participating in the study. However, if 75% of all SMC student-athletes participate in the study, the primary researcher will donate \$500 to the SAAC charity of choice, The Make a Wish Foundation.

Can You Withdraw From This Study?

Participation is voluntary and you may choose to terminate participation in the study anytime prior to completion and submission of the survey. If you chose to withdraw, you should leave the room and not submit the survey. If you begin the survey and chose to withdraw before completion you should simply leave the room and discard the incomplete survey. There is no consequence for withdrawing from the study.

What About Confidentiality?

The information that you provide is anonymous and will be kept confidential. You will not be identified in any reports or papers. All surveys will be kept in a secure and locked cabinet in a locked closet in a locked office in the athletics department. Only the principal investigator (Geri Knortz) will have access to this information.

Contact Information

Should you have any further questions or concerns about this research, you may contact Geri Knortz or her advisor, Bud Meyers, at the address and telephone number given below. If you have any questions about your rights as a participant in a research project or for more information on how to proceed should you believe that you have been injured as a result of your participation in this study, you should contact Nancy Stalnaker, Director of the Research Protections Office at the University of Vermont at 802-656-5040.

Principal Investigator: Geraldine Knortz

Address: Saint Michael's College

Box 258, Colchester, VT 05439

Telephone Number: 802-654-2200

Email: gknortz@smcvt.edu

Name of Faculty Sponsor: Bud Meyers

Address: University of Vermont, Education Department, Waterman Hall Room 477, Burlington, VT 05401

Telephone Number: (802) 656-3282

Email: Bud.Meyers@uvm.edu

Statement Of Consent

You have been given and have read or have had read to you a summary of this research study. Participation in this study is voluntary and you may refuse to participate or withdraw at any time without penalty or prejudice. Your decision whether or not to participate will not impact your past (or future) involvement in athletics at SMC.

By completing the survey you agree to participate in this study.

Appendix F: Survey Administrator Script

Coach Script

I'd like to inform you about an opportunity to participate in a research study about sportspersonship behaviors, which should take about 10-15 minutes of your time. In order to encourage a high rate of return, the primary investigator of this study has offered to make a \$500 donation to the Make a Wish Foundation (the SAAC charity of choice), if 75% or more of the SMC student-athletes complete the survey. If you wish to learn more about the study, please remain in the room while I invite the research assistant to join you. The choice to participate is up to you – it is entirely voluntary. If you do not wish to participate you may leave the room at any time without consequence.

Research Assistant Script

Thank you for your time. My name is XXXX, and I am assisting with the administration of this research project regarding student-athlete attitudes about sporting behaviors. The information sheet I'm distributing gives some important information about the study.

Please follow along as I review this sheet with you.

- (read the sheet word for word)

Does anyone have any questions? This form is for you to keep. Those who agree to complete the survey should remain in the room.

- (allow time to leave)

This study is not a test, but rather a survey on how closely a statement corresponds to your attitudes or beliefs. There are no right or wrong answers. It is most important for you to answer the survey with full honesty.

This study only involves completion of the survey. There will be no attempt to assess your actual or observed sportspersonship tendencies relative to this study. Let me assure you once again that your responses are anonymous.

If you chose to complete the survey please be sure to answer all questions and fill out all information requested at the top and bottom of the survey. I ask that your completed surveys be placed in the secure box provided.

Once I distribute the surveys I will need to leave the room. Does anyone have any final questions before I leave the room?

Thanks so much to everyone for participating.